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THE WRITINGS OF

HENRY DAVID THOREAU

JOURNAL

EDITED BY BRADFORD TORREY

VII

SEPTEMBER 1, 1854–OCTOBER 30, 1855

BOSTON AND NEW YORK
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JOURNAL

VOLUME VII

THE JOURNAL OF HENRY DAVID THOREAU

VOLUME VII

I

SEPTEMBER, 1854 (ÆT. 37)

Sept. 1. A misty morning followed by a still, cloudy, misty day, through which has fallen a very little rain this forenoon already. Now I notice a few faint *chipping* sparrows, busily picking the seeds of weeds in the garden. Are they the Savannah sparrows? They show no white in tail. Yet I see no yellow on brows. Small feathers on back, centred with black and edged with pale brown (?); inner vanes of wing-quills bay; crown without chestnut; brown dash from angle of mouth backward. Do not the sparrows now commonly begin to feed on seeds of weeds in gardens?

P. M. — Along river to E. Hosmer's.

A very little mizzling. The *Aster Tradescanti* is perhaps *beginning* [1] to whiten the shores on moist banks. I see a fine (reddish) topped grass in low lands, whitened like a thin veil with what it has caught of this dewy rain. It wets my feet much.

The *Cornus sericea* berries are now in prime, of dif-

[1] *Vide* Sept. 14.

ferent shades of blue, lighter or darker, and bluish white. They are so abundant as to be a great ornament to our causeways and riverside. The white-berried, too, is now in prime, but drops off. The *Viburnum dentatum* berries are smaller and duller. The *Viburnum Lentago* are just fairly begun to have purple cheeks.

Even this rain or mizzling brings down many leaves of elms and willows, etc., — the first, *to notice*, since the fall of the birches which began so long ago. Saw two wild ducks go over. Another said they were large gray ducks; also that Simon Brown's boy had got a young wild duck which came home from the river with the tame ones.

Sept. 2. The second still, misty, mizzling and rainy day. We all lie abed late. Now many more sparrows in the yard, larger than chip-birds and showing ashy under sides as they fly. A *part* the same as yesterday's. Are they Savannahs, or bay-wings, or both? I see but the *slightest touch* of white in the tail of any. Those clear ashy beneath are cinereous about the shoulders above. A tree sparrow too? though I do not see the spot.[1]

Opened one of my snapping turtle's eggs. The young alive, but not very lively, with shell dark grayish-black; yolk as big as a hazelnut; tail curled round and is considerably longer than the shell, and slender; three ridges on back, one at edges of plates on each

[1] Heard a faint warble from one the next afternoon at about 6 P. M. on apple trees.

side of dorsal, which is very prominent. There is only the trace of a dorsal ridge in the old. Eye open.[1]

P. M. — By boat to Purple Utricularia Shore.

Still and cloudy, all shut in, but no rain. The flags are turned yellow along the river, quite an autumnal scene, with commonly a strip of green left in their centres. The sparganium not changed. The pontederias, half of them, are brown and crisp. Of pads, only the white lily are conspicuous. The button-bushes are generally yellowing, *i. e.*, are of an autumnal yellowish green. The black willows are decidedly crisped and yellowish. The interrupted fern begins to yellow. The autumnal dandelion is conspicuous on the shore.

How handsome ripe grapes with the bloom on them! This rubbed off, they show purple or black. I find some quite sweet which have ripened on a rock. They are a noble fruit to the eye. The waxwork is fairly yellow on all hands. Now is the time to gather it. Ivy leaves on some plants are yellow, scarlet, and dull-red, besides green.

I see white lilies wide open at 2.30 P. M. They are half open even at 5 P. M. in many places this moist cloudy day and thus late in their season. Still a few pontederias also. I see dogsbane still in flower. The *Bidens Beckii* is oftenest eaten (?) off just below the blossom. Saw what I think must be a solitary wood (?) duck. Started it several times, driving it before me up the river, getting within twenty rods. It uttered a shrill quacking each time. Bathed at Hubbard's. The water is surprisingly cold on account of the cool

[1] *Vide* [next page].

weather and rain, but especially since the rain of yesterday morning. It is a very important and remarkable autumnal change. It will not be warm again probably.

To my great surprise I find this morning (September 3d) that the little unhatched turtle, which I thought was sickly and dying, and left out on the grass in the rain yesterday morn, thinking it would be quite dead in a few minutes — I find the shell alone and the turtle a foot or two off vigorously crawling, with neck outstretched (holding up its head and looking round like an old one) and feet surmounting every obstacle. It climbs up the nearly perpendicular side of a basket with the yolk attached. They thus not only continue to live after they are dead, but begin to live before they are alive!

Are those large rigid green clusters the dried fertile flowers of the black ash? The keys are formed and appear ripe.

The moderate mizzling rain of yesterday and to-day is the first (excepting the slight shower in the eve of the 26th *ult.*) since that moderate one of August 4th. Yet this brings down leaves, cools the rivers and ponds, and brings back ducks and other migratory birds. I see two or three large plump sparrows hopping along on the button-bushes and eating the mikania blossoms, sometimes perching on the lower mossy stems and uttering a faint chip, with crown distinctly divided by a light line and another light line over eye, light throat and vent, ashy (?) breast and beneath, without spot. Is it not the white-throated sparrow?

Observed a large clam at the Bath Place, where they have not gone down, — apparently quite old, with a sort of wart-like protuberances, as if the shell were worn into hollows while the harder parts were prominent. The shell, where worn, green, the end shaggy with a kind of moss or alga.

A sort of *Aster longifolius*, some days by Mill Brook on Lowell road, but with *not long*, loose, green-tipped scales, *i. e.* not squarrose. Call this *A. tenuifolius* for present. (It may be *carneus*.)

Two-leaved Solomon's-seal berries red.

I have not allowed enough probably for the smoke mixed with the haze in the late drought. The fires in woods and meadows have been remarkably numerous and extensive all over the country, the earth and vegetation have been so dry, especially along railroads and on mountains and pine plains. Some meadows are said to have been burned three feet deep! On some mountains it burns all the soil down to the rock. It catches from the locomotive, from sportsmen's wadding, and from burning brush and peat meadows. In all villages they smell smoke, especially at night. On Lake Champlain, the pilots of steamboats could hardly see their course, and many complained that the smoke made their eyes smart and affected their throats. Bears, it is said, have in some instances been compelled to migrate.[1]

[1] [The following appears on an inside cover page of the manuscript journal volume that ends here.]

My faults are: —

Paradoxes, — saying just the opposite, — a style which may be imitated.

Sept. 3. *Sunday.* Fair weather and a clear atmosphere after two days of mizzling, cloudy, and rainy weather and some smart showers at daylight and in the night. The street is washed hard and white.

P. M. — With Minot Pratt into Carlisle.

Woodbine berries purple. Even at this season I see some fleets of yellow butterflies in the damp road after the rain, as earlier. Pratt showed me a tobacco flower, long and tubular, slightly like a datura. In his yard appears a new variety of sweet-briar which he took out of the woods behind his house; larger bush and leaves, leaves less glandular and sticky beneath, the principal serrations deeper and much sharper, and the whole leaf perhaps less rounded. Saw some winged ants silvering a circular space in the pasture grass about five inches in diameter, a few *very large ones* among them. Very thick and incessantly moving, one upon another, some without wings, all running about in great excitement. It seemed the object of the winged ones to climb to the top of the grass blades, one over another, and then take to wing, which they did. In the meadow southwest of Hubbard's Hill saw

Ingenious.
Playing with words, — getting the laugh, — not always simple, strong, and broad.
Using current phrases and maxims, when I should speak for myself.
Not always earnest.
"In short," "in fact," "alas!" etc.
Want of conciseness.

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white Polygala sanguinea, not described. Lambkill again in Hunt Pasture. Close to the left-hand side of bridle-road, about a hundred rods south of the oak, a bayberry bush without fruit, probably a male one. It made me realize that this was only a more distant and elevated sea-beach and that we were within reach of marine influences. My thoughts suffered a sea-turn. North of the oak (four or five rods), on the left of the bridle-road in the pasture next to Mason's, tried to find the white hardhack still out, but it was too late. Found the mountain laurel out again, one flower, *close* sessile on end of this year's shoot. There were numerous blossom-buds expanding, and they may possibly open this fall. Running over the laurel an amphicarpæa in bloom, some pods nearly an inch long, out probably a week, or ten days at most. *Epilobium molle*, linear, still in flower in the spruce swamp, near my path. A white hardhack out of bloom by a pile of stones (on which I put another) in Robbins's field, and a little south of it a clump of red huckleberries.

Sept. 4. *Monday. Aster multiflorus.* Observed the under sides of a shrub willow by the river, lit by the rays of the rising sun, shining like silver or dewdrops. Yet, when I stood nearer and looked down on them at a different angle, they were quite dull.

I have provided my little snapping turtle with a tub of water and mud, and it is surprising how fast he learns to use his limbs and this world. He actually runs, with the yolk still trailing from him, as if he had

got new vigor from contact with the mud. The insensibility and toughness of his infancy make our life, with its disease and low spirits, ridiculous. He impresses me as the rudiment of a man worthy to inhabit the earth. He is born with a shell. That is symbolical of his toughness. His shell being so rounded and sharp on the back at this age, he can turn over without trouble.

P. M. — To climbing fern.

Polygonum articulatum, apparently three or four days. In the wood-paths I find a great many of the Castile-soap galls, more or less fresh. Some are saddled on the twigs. They are now dropping from the shrub oaks. Is not Art itself a gall? Nature is stung by God and the seed of man planted in her. The artist changes the direction of Nature and makes her grow according to his idea. If the gall was anticipated when the oak was made, so was the canoe when the birch was made. Genius stings Nature, and she grows according to its idea.

7.30. — To Fair Haven Pond by boat.

Full moon; bats flying about; skaters and water-bugs (?) like sparks of fire on the surface between us and the moon. The high shore above the railroad bridge was very simple and grand, — first the bluish sky with the moon and a few brighter stars, then the near high level bank like a distant mountain ridge or a dark cloud in the eastern horizon, then its reflection in the water, making it double, and finally the glassy water and the sheen in one spot on the white lily pads.

Some willows for relief in the distance on the right. It was Ossianic.

I noticed this afternoon that bubbles would not readily form on the water, and soon burst, probably on account of the late rains, which have changed its quality. There is probably less stagnation and scum. It is less adhesive.

A fine transparent mist. Lily Bay seemed as wide as a lake. You referred the shore back to the Clamshell Hills. The mere edge which a flat shore presents makes no distinct impression on the eye and, if seen at all, appears as the base of the distant hills. Commonly a slight mist yet more conceals it. The dim low shore, but a few rods distant, is seen as the base of the distant hills whose distance you know. The low shore, if not entirely concealed by the low mist, is seen against the distant hills and passes for their immediate base. For the same reason hills near the water appear much more steep than they are. We hear a faint metallic chip from a sparrow on the button-bushes or willows now and then. Rowse was struck by the simplicity of nature now, — the sky the greater part, then a little dab of earth, and after some water near you. Looking up the reach beyond Clamshell, the moon on our east quarter, its sheen was reflected for half a mile from the pads and the rippled water next them on that side, while the willows lined the shore in indistinct black masses like trees made with India ink (without distinct branches), and it looked like a sort of Broadway with the sun reflected from its pavements. Such willows might be made with soot

or smoke merely, lumpish with fine edges. Meanwhile Fair Haven Hill, *seen blue through the transparent mist*, was as large and imposing as Wachusett, and we seemed to be approaching the *Highlands* of the river, a mountain pass, where the river had burst through mountains. A high mountain would be no more imposing.

Now I began to hear owls, screech (?) owls, at a distance up-stream; but we hardly got nearer to them, as if they retreated before us. At length, when off Wheeler's grape and cranberry meadow, we heard one near at hand. The rhythm of it was *pe-pe-ou;* this once or twice repeated, but more of a squeal and somewhat human. Or do not all strange sounds thrill us as *human*, till we have learned to refer them to their proper source? They appeared to answer one another half a mile apart; could be heard from far woods a mile off.

The wind has risen and the echo is poor; it does not reverberate up and down the river. No sound of a bullfrog, but steadily the cricket-like *Rana palustris* [1] alongshore.

Rowse heard a whip-poor-will at Sleepy Hollow to-night. No scent of muskrats.

Sept. 5. Were those plump birds which looked somewhat like robins crossing the river yesterday afternoon golden plover? I heard the upland plover note at same time, but these were much stouter birds. The dangle-berries are now the only whortleberries which

[1] [Changed in pencil, evidently at a later date, to "mole cricket."]

are *quite* fresh. The feverwort berries began to turn about a fortnight ago. Now quite yellow.

P. M. — Up Assabet to Sam Barrett's Pond.

The river rising probably. The river weeds are now much decayed. Almost all pads but the white lily have disappeared, and they are thinned, and in midstream those dense beds of weeds are so much thinned (potamogeton, heart-leaf, sparganium, etc., etc.) as to give one the impression of the river having risen, though it is not more than six inches higher on account of the rain. As I wade, I tread on the great roots only of the yellow lily. I see now, against the edge of the pads on each side of the stream, a floating wreck of weeds, at first almost exclusively the *Sparganium minor*, which stood so thick in midstream, the first important contribution to the river wreck. These apparently become rotten or loose (though they are still green), and the wind and water wash them to one side. They form floating masses of wreck, and a few small siums and pontederias are already mixed with them. The stream must be fullest of weeds and most verdurous (potamogetons, heart-leaf, sparganium, etc.) when the brink is in perfection. The potamogetons are much decayed and washed and blown into a snarl, and no longer cover the surface with a smooth green shield, nor do the heart-leaf.

This is a fall phenomenon. The river weeds, becoming rotten, though many are still green, fall or are loosened, the water rises, the winds come, and they are drifted to the shore, and the water is cleared.

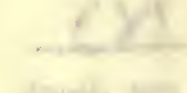
During the drought I used to see Sam Wheeler's

men carting hogsheads of water from the river to water his shrubbery. They drove into the river, and, naked all but a coat and hat, they dipped up the water with a pail. Though a shiftless, it looked like an agreeable, labor that hot weather.

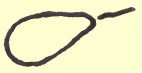
Bathed at the swamp white oak, the water again warmer than I expected. One of these larger oaks is stripped nearly bare by the caterpillars. Cranberry-raking is now fairly begun. The very bottom of the river there is loose and crumbly with sawdust. I bring up the coarse *bits* of wood (water-logged) between my feet. I see much thistle-down without the seed floating on the river. Saw a hummingbird about a cardinal-flower over the water's edge. Just this side the rock, the water near the shore and pads is quite *white* for twenty rods, as with a white sawdust, with the exuviæ of small insects about an eighth of an inch long, mixed with scum and weeds, apparently like the green lice on birches, though they want the long antennæ of the last. Yet I suspect they are the same. Did not the rain destroy them? What others are so plenty? I see, as often before, a dozen doves on the rock, apparently for coolness, which fly before me. *Polygonum amphibium* var. *terrestre* apparently in prime. I find some zizania grains almost black. See a chip-bird. See many galls thickly clustered and saddled about the twigs of some young swamp white oaks, dome-shaped; hold on all winter; with grubs in middle; reddish-green.

A pretty large tupelo on a rock behind Sam Bar-

Sam Barrett's Mill-Pond



rett's; some of its leaves a very deep and brilliant scarlet, equal to any leaves in this respect. Some waxwork leaves variegated greenish-yellow and dark-green. His pond has been almost completely dry, — more than he ever knew, — and is still mostly so. The muddy bottom is exposed high and dry, half a dozen rods wide, and half covered with great drying yellow and white lily pads and stems. He improves the opportunity to skim off the fertile deposit for his compost-heap. Saw some button-bush balls going to seed, which were really quite a *rich red* over a green base, especially in this evening light. They are commonly greener and much duller reddish. Barrett shows me some very handsome pear-shaped cranberries, not uncommon, which may be a permanent variety different from the common rounded ones. Saw two pigeons which flew about his pond and then lit on the elms over his house. He said they had come to drink from Brooks's, as they often did. He sees a blue heron there almost every morning of late. Such is the place for them. A soapwort gentian by river; remarkably early (?). The top has been bitten off! I hear the tree-toad to-day. Now at sundown, a blue heron flaps away from his perch on an oak over the river before me, just above the rock. Hear locusts after sundown.



Sept. 6. 6 A. M. — To Hill.

The sun is rising directly over the eastern (magnetic east) end of the street. Not yet the equinox. I hear a faint warbling vireo on the elms still, in the

morning. My little turtle, taken out of the shell September 2d, has a shell one and seven fortieths inches long, or four fortieths longer than the diameter of the egg-shell, to say nothing of head and tail. Warm weather again, and sultry nights the last two. The last a splendid moonlight and quite warm.

I am not sure that I have seen bobolinks for ten days, nor blackbirds since August 28th.

9 P. M. — There is now approaching from the west one of the heaviest thunder-showers (apparently) and with the most incessant flashes that I remember to have seen. It must be twenty miles off, at least, for I can hardly hear the thunder at all. The almost incessant flashes reveal the form of the cloud, at least the upper and lower edge of it, but it stretches north and south along the horizon further than we see. Every minute I see the crinkled lightning, intensely bright, dart to earth or forkedly along the cloud. It does not always dart *direct* to earth, but sometimes very crookedly, like the bough of a tree, or along the cloud forkedly. The forked thunderbolt of the poets. It seems like a tremendous dark battery bearing down on us, with an incessant fire kept up behind it. And each time, apparently, it strikes the earth or something on it with terrific violence. We feel the rush of the cool wind while the thunder is yet scarcely audible. The flashes are, in fact, incessant for an hour or more, though lighting up different parts of the horizon, — now the edges of the cloud, now far along the horizon, — showing a clearer golden space beneath the

cloud where rain is falling, through which stream tortuously to earth the brilliant bolts. It is a visible striking or launching of bolts on the devoted villages. It crinkles through the clear yellow portion beneath the cloud where it rains, like fiery snakes or worms, like veins in the eye. At first it was a small and very distant cloud in the southwestern horizon, revealed by its own flashes, — its rugged upper outline and its whole form revealed by the flashes, — and no thunder heard. It seemed like a ship firing broadsides, but it gradually advanced and extended itself, and united with others north and south along the horizon, and the thunder began to be heard, and wind came, etc. At last came the rain, but not heavy, nor the thunder loud, but the flashes were visible all around us.

Before this, in the afternoon, to the Hollowell place *via* Hubbard Bath, crossing the river.

A very warm day, *one* of the warmest of the year. The water is again warmer than I should have believed; say an *average* summer warmth, yet not so warm as it has been. It makes me the more surprised that only that day and a half of rain should have made it so very cold when I last bathed here. Is not all our really hot weather always contained between the 20th of May and the middle of September? The checkerberries are just beginning to redden. The cinnamon ferns along the edge of woods next the meadow are many yellow or cinnamon, or quite brown and withered. The sarsaparilla leaves, green or reddish, are spotted

with yellow eyes centred with reddish, or dull-reddish eyes with yellow iris. They have a very pretty effect held over the forest floor, beautiful in their decay. The sessile-leaved bellwort is yellow, green, and brown, all together or separately. Some white oak leaves are covered with dull-yellow spots. Now apparently is the time to gather the clusters of shrub oak acorns, before they drop, to adorn a shelf with. Some, however, are ready to fall on account of the late drought. I see where the squirrels have eaten them (the *ilicifolia*) and left the shells on a stump. See galls on the chinquapin, sessile on the stem, spherical, and in appearance between that of yesterday on the swamp white oak, and the Castile-soap galls. I think I may say that large Solomon's-seal berries have begun to be red. I see no swallows now at Clamshell. They have probably migrated. Still see the cracks in the ground, and no doubt shall till snow comes. Very few of the *Aster undulatus* this year, and they late.

Some large roundish or squarish *Viburnum nudum* berries by fence between Hosmer Spring and Lupine Hill, near foot of hill, but I see no difference between the leaves, etc., and the others.

An aster, *longifolius*-like, some days at Hosmer Ditch, with smaller flowers, 27-rayed, smaller scales, leaves rough above and serrate, and purple stem rough. I will call it *A. carneus* for present. A similar, with flesh-colored blossom and longer scales, at A. Heywood Ditch. It may be a variety of what I saw by Mill Brook and called *tenuifolius;* scales alike, but that had smooth leaves.

Sept. 7. *Thursday.* The rain of last night has brought down more leaves of elms and buttonwoods.

P. M. — To Moore's Swamp and Walden.

See some hips of the moss rose, very large and handsome, bright-scarlet, very much *flattened* globular. On the Walden road heard a somewhat robin-like clicking note. Looked round and saw one of those small slate-colored, black-tipped, white-rumped hawks skimming over the meadows with head down, at first thirty feet high, then low till he appeared to drop into the grass.[1] It was quite a loud *clicketing* sound.

Paddled to Baker Farm just after sundown, by full moon.

I suppose this is the Harvest Moon, since the sun must be in Virgo, enters Libra the 23d *inst.*

The wind has gone down, and it is a still, warm night, and no mist.

It is just after sundown. The moon not yet risen, one star, Jupiter (?), visible, and many bats over and about our heads, and small skaters creating a myriad dimples on the evening waters. We see a muskrat crossing, and pass a white cat on the shore. There are many clouds about and a beautiful sunset sky, a yellowish (dunnish?) golden sky, between them in the horizon, looking up the river. All this is reflected in the water. The beauty of the sunset is doubled by the reflection. Being on the water we have double the amount of lit and dun-colored sky above and beneath. An elm in the yellow twilight looks very rich, as if

[1] Male marsh hawk.

moss- or ivy-clad, and a dark-blue cloud extends into the dun-golden sky, on which there is a little fantastic cloud like a chicken walking up the point of it, with its neck outstretched. The reflected sky is more dun and richer than the real one. Take a glorious sunset sky and double it, so that it shall extend downward beneath the horizon as much as above it, blotting out the earth, and [let] the lowest half be of the deepest tint, and every beauty more than before insisted on, and you seem withal to be floating directly into it. This seems the first autumnal sunset. The small skaters seem more active than by day, or their slight dimpling is more obvious in the lit twilight. A stray white cat sits on the shore looking over the water. This is her hour. A nighthawk dashes past, low over the water. This is what we had.

It was in harmony with this fair evening that we were not walking or riding with dust and noise through it, but moved by a paddle without a jar over the liquid and almost invisible surface, floating directly toward those islands of the blessed which we call clouds in the sunset sky. I thought of the Indian, who so many similar evenings had paddled up this stream, with what advantage he beheld the twilight sky. So we advanced without dust or sound, by gentle influences, as the twilight gradually faded away. The height of the railroad bridge, already high (more than twenty feet to the top of the rail), was doubled by the reflection, equalling that of a Roman aqueduct, for we could not possibly see where the reflection began, and the piers appeared to rise from the lowest part of the reflection

to the rail above, about fifty feet. We floated directly under it, between the piers, as if in mid-air, not being able to distinguish the surface of the water, and looked down more than twenty feet to the reflected flooring through whose intervals we saw the starlit sky. The ghostly piers stretched downward on all sides, and only the angle made by their meeting the real ones betrayed where was the water surface.

The twilight had now paled (lost its red and dun) and faintly illumined the high bank. I observed no firefly this evening, nor the 4th. The moon had not yet risen and there was a half-hour of dusk, in which, however, we saw the reflections of the trees. Any peculiarity in the form of a tree or other object — if it leans one side or has a pointed top, for instance — is revealed in the reflection by being doubled and so insisted on. We detected thus distant maples, pines, and oaks, and they were seen to be related to the river as mountains in the horizon are by day.

Night is the time to hear; our ears took in every sound from the meadows and the village. At first we were disturbed by the screeching of the locomotive and rumbling of the cars, but soon were left to the fainter natural sounds, — the creaking of the crickets, and the little *Rana palustris*[1] (I am not sure that I heard it the latter part of the evening), and the shrilling of other crickets (?), the occasional faint lowing of a cow and the distant barking of dogs, as in a whisper. Our ears drank in every sound. I heard once or twice a

[1] ["Mole cricket" is here substituted in pencil for "*Rana palustris.*"]

dumping frog. This was while we lay off Nut Meadow Brook waiting for the moon to rise. She burned her way slowly through the small but thick clouds, and, as fast as she triumphed over them and rose over them, they appeared pale and shrunken, like the ghosts of their former selves. Meanwhile we measured the breadth of the clear cope over our heads, which she would ere long traverse, and, while she was concealed, looked up to the few faint stars in the zenith which is ever lighted. C. thought that these few faint lights in the ever-lit sky, whose inconceivable distance was enhanced by a few downy wisps of cloud, surpassed any scene that earth could show.[1] When the moon was behind those small black clouds in the horizon, they had a splendid silver edging. At length she rose above them and shone aslant, like a ball of fire over the woods. It was remarkably clear to-night, and the water was not so remarkably broad therefore, and Fair Haven was not clothed with that blue veil like a mountain, which it wore on the 4th, but it was not till we had passed the bridge that the first sheen was reflected from the pads. The reflected shadow of the Hill was black as night, and we seemed to be paddling directly into it a rod or two before us, but we never reached it at all. The trees and hills were distinctly black between us and the moon, and the water black or gleaming accordingly. It was quite dry and warm. Above the Cliffs we heard only one or two owls at a distance, a hooting owl and a screech owl, and several whip-poor-wills. The delicious fra-

[1] [*Excursions*, p. 328; Riv. 403.]

grance of ripe grapes was wafted to us by the night air, as we paddled by, from every fertile vine on the shore, and thus its locality was revealed more surely than by daylight. We knew their fragrance was better than their flavor. They perfumed the whole river for a mile, by night. You might have thought you had reached the confines of Elysium. A slight zephyr wafted us almost imperceptibly into the middle of Fair Haven Pond, while we lay watching and listening. The sheen of the moon extended quite across the pond to us in a long and narrow triangle, or rather with concave sides like a very narrow Eddystone Lighthouse, with its base on the southwest shore, and we heard the distant sound of the wind through the pines on the hill-top. Or, if we listened closely, we heard still the faint and distant barking of dogs. They rule the night. Near the south shore disturbed some ducks in the water, which slowly flew away to seek a new resting-place, uttering a distinct and alarmed *quack* something like a goose.

We walked up to the old Baker house. In the bright moonlight the character of the ground under our feet was not easy to detect, and we did not know at first but we were walking on sod and not on a field laid down and harrowed. From the upland the pond in the moonlight looked blue, — as much so as the sky. We sat on the window-sill of the old house, thought of its former inhabitants, saw our bandit shadows down the cellar-way (C. had on a red flannel shirt over his thin coat, — since he expected it would be cold and damp, — and looked like one), listened to

each sound, and observed each ray of moonlight through the cracks. Heard an apple fall in the little orchard close by, while a whip-poor-will was heard in the pines.

Returning to the boat, saw a glow-worm in the damp path in the low ground. Returning later, we experienced better the weird-like character of the night, especially perceived the fragrance of the grapes and admired the fair smooth fields in the bright moonlight. There being no mist, the reflections were wonderfully distinct; the whole of Bittern Cliff with its grove was seen beneath the waves.

Sept. 8. P. M.—To boat under Fair Haven Hill *via* Hubbard Bath, etc., a-graping.

The ivy at ivy tree is scarlet a quarter part. Saw one of my small slate-colored hawks of yesterday, sitting in the midst of the upland field beyond, like a crow. There is a great crop of *Viburnum nudum* berries this year. The green-briar berries not quite ripe. Clams still lie up.

The grapes would no doubt be riper a week hence, but I am compelled to go now before the vines are stripped. I partly smell them out. I pluck splendid great bunches of the purple ones, with a rich bloom on them and the purple glowing through it like a fire; large red ones, also, with light dots, and some clear green. Sometimes I crawl under low and thick bowers, where they have run over the alders only four or five feet high, and see the grapes hanging from a hollow hemisphere of leaves over my head. At other times I see them dark-purple or black against the silvery

undersides of the leaves, high overhead where they have run over birches or maples, and either climb or pull them down to pluck them. The witch-hazel on Dwarf Sumach Hill looks as if it would begin to blossom in a day or two.

Talked with Garfield, who was fishing off his shore. By the way, that shore might be named from him, for he is the genius of it, and is almost the only man I ever see on that part of the river. He says that the two turtles, of one of which I have the shell, weighed together eighty-nine pounds. He saw one when he was a boy, which his father caught in Fair Haven Pond, which several who saw it thought would have weighed sixty pounds. That the biggest story he could tell. Referred to the year not long since when so many were found dead. There was one rotting right on that shore where we were, "as big as a tray." Once, he and another man were digging a ditch in a meadow in Waltham. (He thought it was the last of September or first of October — and that we did not see them put their heads out much later than this.) They found two mud turtles three feet beneath the surface and no hole visible by which they entered. They laid them out on the grass, but when they went to look for them again, one was lost and the other had buried himself in the meadow all but the tip of his tail.

He heard some years ago a large flock of brant go over "yelling" very loud, flying low and in an irregular dense flock like pigeons. He says the east shore of Fair Haven under the Hill is covered with heron-tracks. One of his boys had seen marks where an otter had

slid and eaten fish near the mouth of Pole Brook (my Bidens Brook). Remembered old people saying that this river used to be a great hunting-place a hundred years ago or more. A still stream with meadows, and the deer used to come out on it. Had heard an old Mr. Hosmer, who lived where E. Conant does, say that he had shot three dozen muskrats at one shot at Birch Island (the island at mouth of Fair Haven Pond).

His father caught the great turtle while fishing and sent him up to the house on Baker's farm where a Jones lived, to get an axe to cut his head off. There were two or three men — Luke Potter, who lived where Hayden does, for one — playing cards, and when they learned what he wanted the axe for, they came down to the shore to see him, and they judged that he would weigh sixty pounds. Two or three years ago he saw one caught that weighed forty-two pounds.

I saw a muskrat-cabin apparently begun on a small hummock for a core, now just before the first frost and when the river wreck had begun to wash about. Those fine mouthfuls *appear* to be gathered from the river-bottom, — fine pontederias, sium, fontinalis, etc., etc., decayed but somewhat adhesive. See fresh pontederia blossoms still. Started up ten ducks, which had settled for the night below the bath place, apparently wood ducks.

I doubt if I have distinguished the *Bidens cernua*. It may be the one I have thought a small *chrysanthemoides*. I find these last with smaller rays and larger outer involucres and more or less bristly stems, yet

equally connate and as regularly serrate, and it looks like a difference produced by growing in a drier soil.

Many green-briar leaves are very agreeably thickly spotted now with reddish brown, or fine green on a yellow or green ground, producing a wildly variegated leaf. I have seen nothing more rich. Some of these curled leaves are five inches wide with a short point. It is a leaf now for poets to sing about, a leaf to inspire poets. Now, while I am gathering grapes, I see them. It excites me to a sort of autumnal madness. They are leaves for Satyrus and Faunus to make their garlands of. My thoughts break out like them, spotted all over, yellow and green and brown. The freckled leaf. Perhaps they should be poison, to be thus spotted. I fancied these brown were blood-red spots, by contrast, but they are not. Now for the ripening year! Even leaves are *beginning* to be ripe.

Garfield says he found a hen-hawk's nest near Holden's Swamp (the old ones had got his chickens), sixty feet up a white pine. He climbed up and set a trap in it baited with a fish, with a string ten feet long attached. The young, but just hatched, faced him, and he caught the old one by the legs thus.

I have brought home a half-bushel of grapes to scent my chamber with. It is impossible to get them home in a basket with all their rich bloom on them, which, no less than the form of the clusters, makes their beauty. As I paddled home with my basket of grapes in the bow, every now and then their perfume was wafted to me in the stern, and I thought that I was passing a richly laden vine on shore. Some goldfinches twitter

over, while I am pulling down the vines from the birch-tops. The ripest rattle off and strew the ground before I reach the clusters, or, while I am standing on tiptoe and endeavoring gently to break the tough peduncle, the petiole of a leaf gets entangled in the bunch and I am compelled to strip them all off loosely.

> "Yet once more . . .
> I come to pluck your berries harsh and crude,
> And with forc'd fingers rude,
> Shatter your leaves before the mellowing year." [1]

Sept. 9. This morning I find a little hole, three quarters of an inch or an inch over, above my small tortoise eggs, and find a young tortoise coming out (apparently in the rainy night) just beneath. It is the *Sternothærus odoratus* — already has the strong scent — and now has drawn in its head and legs. I see no traces of the yolk, or what-not, attached. It may have been out of the egg some days. *Only one* as yet. I buried them in the garden June 15th.

I am affected by the thought that the earth nurses these eggs. They are planted in the earth, and the earth takes care of them; she is genial to them and does not kill them. It suggests a certain vitality and intelligence in the earth, which I had not realized. This mother is not merely inanimate and inorganic. Though the immediate mother turtle abandons her offspring, the earth and sun are kind to them. The old turtle on which the earth rests takes care of them while the other waddles off. Earth was not made poisonous and deadly to them. The earth has some

[1] [Milton's *Lycidas*.]

virtue in it; when seeds are put into it, they germinate; when turtles' eggs, they hatch in due time. Though the mother turtle remained and brooded them, it would still nevertheless be the universal world turtle which, through her, cared for them as now. Thus the earth is the mother of all creatures.

Garfield said that one of his sons, while they were haying in the river meadows once, found a hundred little pickerel, an inch or inch and a half long, in [a] little hole in the meadow not bigger than a bushel basket and nearly dry. He took them out and put them into the river. Another time he himself found many hundred in a ditch, brought them home, and put them into his large tub. They there lived a spell without his feeding them, but, small as they were, lived on one another, and you could see the tails sticking out their mouths. It would seem as if their spawn was deposited in those little muddy-bottomed hollows in the meadows where we find the schools of young thus landlocked.

Sept. 10. Yesterday and to-day the first regular rain-storm, bringing down more leaves, — elms, button woods, and apple tree, — and decidedly raising the river and brooks. The still, cloudy, mizzling days, September 1st and 2d, the thunder-shower of evening of September 6th, and this regular storm are the first fall rains after the long drought. Already the grass both in meadows and on hills looks greener, and the whole landscape, this overcast rainy day, darker and more verdurous. Hills which have been russet and tawny begin to show some greenness.

On account of the drought one crop has almost entirely failed this year thus far, which the papers have not spoken of. Last year, for the last three weeks of August, the woods were filled with the strong musty scent of decaying fungi, but this year I have seen very few fungi and have not noticed that odor at all, — a failure more perceptible to frogs and toads, but no doubt serious to those whom it concerns.

As for birds: —

About *ten* days ago *especially* I saw many large hawks, probably hen-hawks and young, about.

Within a week several of the small slate-colored and black-tipped hawks.

August 20th, saw a sucker which I suppose must have been caught by a fish hawk.

Hear screech owls and hooting owls these evenings.

Have not noticed blue jays of late.

Occasionally hear the *phe-be* note of chickadees.

Partridges probably cease to mew for their young.

For about three weeks have seen one or two small dippers.

For ten days a *few* wood and probably black ducks.

Small flocks of bluebirds about apple trees.

Larks common, but have not heard them sing for some time.

Am not sure that I have seen red-wings or other blackbirds for ten days.

About three weeks ago a small flock of robins and pigeon woodpeckers.

Robins common, and still hear some faint notes of woodpeckers.

Saw a downy woodpecker as a rarity within a week.

Believe I hear no song sparrows sing nowadays.

See no *F. hyemalis;* hear no quails.

Heard my last phœbe August 26th.

See no *flocks* of white-in-tails.

Hear the nuthatch as a novelty within a week about street.

Saw first tree sparrow about a week since in first rain.[1]
Have seen pigeons about a fortnight.
Have not distinguished rush sparrows for a long time, nor Savannah, nor yellow-winged.
Seen no snipe since August 16th.
Turtle doves for more than a month.
A chip-sparrow seen within a few days.
The warbling vireo still heard faintly in the morning.
For three weeks blue herons common on meadows and great bittern.
Green bittern rather earlier for most part.
Have not heard kingfisher of late, — not for three weeks methinks.
Methinks I heard a faint sound from a chewink within a week?
Seen no barn swallows for a week.
Heard no catbirds nor brown thrashers sing for long time, but seen the last at least within ten days.
Whip-poor-wills still common.
Think I saw white-throated (?) sparrows on button-bushes about a week ago, the mizzling day.
Hear no golden robins for the last fortnight.
Bats common.
Not sure I have seen bobolinks since August 20th.
Kingbirds seen within a day or two.
Hummingbird within a week.
Goldfinches common.
Nighthawks still, but have not noticed the booming lately.
Cherry-birds common.
Cuckoo not heard lately.
Meadow-hen (?) seen August 30th.
Now generally ducks and other migratory birds are returning from north and ours going south.[2]

Diplopappus linariifolius and *Aster undulatus* apparently now in prime.

[1] [Probably a mistake. The date is too early.]

[2] [It is significant that no warblers are included, even negatively, in this list. Compare entry of June 9, 1854.]

Sept. 11. Measured to-day the little *Sternothærus odoratus* which came out the ground in the garden September 9th. Its shell is thirty-two fortieths of an inch long, by twenty-five fortieths wide. It has a distinct dorsal ridge, and its head and flippers are remarkably developed. Its raised back and dorsal ridge, as in the case of the mud turtle, enable it to turn over very easily. It may have been hatched some time before it came out, for not only there was no trace of the *yolk* (?), but its shell was much wider than the egg, when it first came out of the ground. I placed a sieve over it, and it remained in the hole it had made mostly concealed the two rainy days, — the 9th and 10th, — but to-day I found it against the edge of the sieve, its head and legs drawn in and quite motionless, so that you would have said the pulses of life had not fairly begun to beat. I put it into the tub on the edge of the mud. It seems that it does not have to learn to walk, but walks at once. It seems to have no infancy such as birds have. It is surprising how much cunning it already exhibits. It is defended both by its form and color and its instincts. As it lay on the mud, its color made it very inobvious, but, besides, it kept its head and legs drawn in and perfectly still, as if feigning death; but this was not sluggishness. At a little distance I watched it for ten minutes or more. At length it put its head out far enough to see if the coast was clear, then, with its flippers, it turned itself toward the water (which element it had never seen before), and suddenly and with rapidity launched itself into it and dove to the bottom. Its whole behavior was

calculated to enable it to reach its proper element safely and without attracting attention. Not only was it made of a color and form (like a bit of coal) which alone almost effectually concealed it, but it was made, infant as it was, to be perfectly still as if inanimate and then to move with rapidity when unobserved. The oldest turtle does not show more, if so much, cunning. I think I may truly say that it uses cunning and meditates how it may reach the water in safety. When I first took it out of its hole on the morning of the 9th, it shrunk into its shell and was motionless, feigning death. That this was not sluggishness, I have proved. When to-day it lay within half an inch of the water's edge, it knew it for a friendly element and, without deliberation or experiment, but at last, when it thought me and all foes unobservant of its motions, with remarkable precipitation it committed itself to it as if realizing a long-cherished idea. Plainly all its motions were as much the result of what is called instinct as is the act of sucking in infants. Our own subtlest [*sic*] is likewise but another kind of instinct. The wise man is a wise infant obeying his finest and never-failing instincts. It does not so much impress me as an infantile beginning of life as an epitome of all the past of turtledom and of the earth. I think of it as the result of all the turtles that have been.

The little snapping turtle lies almost constantly on the mud with its snout out of water. It does not keep under water long. Yesterday in the cold rain, however, it lay buried in the mud all day!

Surveying this forenoon, I saw a small, round,

bright-yellow gall (some are red on one side), as big as a moderate cranberry, hard and smooth, saddled on a white oak twig. So I have seen them on the swamp white, the chinquapin, and the white, not to mention the Castile-soap one on the *ilicifolia* acorn edge.

This is a *cold* evening with a white twilight, and threatens frost, the first in *these respects* decidedly autumnal evening. It makes us think of wood for the winter. For a week or so the evenings have been sensibly longer, and I am beginning to throw off my summer idleness. This twilight is succeeded by a brighter starlight than heretofore.

Sept. 12. *Tuesday.* A cool, overcast day threatening a storm. Yesterday, after the two days' cold rain, the air was very clear and fine-grained. This is a phenomenon we observe now after dog-days, until it is summed up in Indian summer.

P. M. — To Hubbard Bath.

Methinks these cool cloudy days are important to show the colors of some flowers, — that with an absence of light their own colors are more conspicuous and grateful against the cool, moist, dark-green earth, — the *Aster puniceus* (the most densely massed), the (now beginning to prevail) *Tradescanti*, purple gerardia, etc., etc. The river has at length risen perceptibly, and bathing I find it colder again than on the 2d, so that I stay in but a moment. I fear that it will not again be warm. The weeds in midstream are mostly drowned and are washing up to the shore, — much vallisneria and heart-leaf (with its threadlike

stems) are added to the previous wreck. (*Vide* September 5th.)

A sprinkling drove me back for an umbrella, and I started again for Smith's Hill *via* Hubbard's Close. I see plump young bluebirds in small flocks along the fences, with only the primaries and tail a bright blue, the other feathers above dusky ashy-brown, tipped with white. How much more the crickets are heard a cool, cloudy day like this! Is it not partly because the air is stiller? I see the *Epilobium molle* (?) (linear) in Hubbard's Close still out, but I cannot find a trace of the fringed gentian. I scare pigeons from Hubbard's oaks beyond. How like the creaking of trees the slight sounds they make! Thus they are concealed. Not only their *prating* or *quivet* is like a sharp creak, but I heard a sound from them like a dull grating or cracking of bough on bough. I see the small aster (?) in the woods with ink-black spots at the base of the leaves. (It looks like a *dumosus*, but has no flowers.) *White* oak acorns have many of them fallen. They are small and very neat light-green acorns, with small cups, commonly arranged two by two close together, often with a leaf growing between them; but frequently three, forming a little star with three rays, looking very artificial. Some black scrub oak acorns have fallen, and a few black oak acorns also have fallen. The red oak began to fall first. Thorn apples are now commonly ripe and the prinos berries are conspicu-

ous. Beside many white birch I now see many chestnut leaves fallen and brown in the woods. There is now at last some smell of fungi in the woods since the rains.

On a white oak beyond Everett's orchard by the road, I see quite a flock of pigeons; their blue-black droppings and their feathers spot the road. The bare limbs of the oak apparently attracted them, though its acorns are thick on the ground. These are found whole in their crops. They swallow them whole. I should think from the droppings that they had been eating berries. I hear that Wetherbee caught ninety-two dozen last week.

I see maple viburnum berries blue-black with but little bloom. No *full* cymes, and the cymes rather less spreading than the other kinds. Some time. Now, especially, the strong bracing scent of the delicate fern by the Saw Mill Brook path. Dicksonia? or a coarser? How long has the mitchella been ripe? I see many still perfectly green in the swamp. Fruit of the damp and mossy forest floor ripening amid the now mildewy and bracing fern scent of the damp wood. Medeola berries shining black (or perhaps dark blue-black?) on long peduncles; how long? The whorls of leaves now stand empty for most part like shallow saucers, with their purple centres and bare peduncles.

I hear that many upland plover have been seen on the burnt Brooks's meadow.

Marsh speedwell and yellow Bethlehem-star still out.

Sept. 13. *Wednesday.* P. M. — To Great Fields.

Many butternuts have dropped, — more than walnuts. A few raspberries still fresh. I find the large thistle (*Cirsium muticum*) out of bloom, seven or eight rods, perhaps, north of the potato-field and seven feet west of ditch, amid a clump of raspberry vines.

Sept. 14. *Thursday.* 6 A. M. — To Hill.

I hear a vireo still in the elms. The banks have now *begun* fairly to be sugared with the *Aster Tradescanti.* I get very near a small dipper behind Dodd's, which sails out from the weeds fairly before me, then scoots over the surface crosswise the river, throwing the water high, dives, and is lost. A *Viola lanceolata* out on the meadow.

The sun soon after rising has gone into a mackerel sky this morning, and, as I come down the hill, I observe a singular mirage (?). There is a large dense field of mackerel sky with a straight and distinct edge parallel with the southeast horizon and lifted above it, apparently about double the height of the highest hills there; beneath this a clear sky, and lower still some level bars of mist, which cut off the top of Pine Hill, causing it to loom. The top, fringed with pines on account of the intervening lower mist, is seen as it were above the clouds, appears much too high, being referred to a far greater distance than the reality. Our humble scenery appears on a grand scale. I see the fair forms of mighty pines standing along a mountain ridge above the clouds and overlooking from a vast distance our low valley. I think that the image is not

really elevated, but the bars of mist below make me refer it to too great a distance and therefore it is seen as higher. The appearance of those fine-edged pines, a narrow strip of a mountain ridge half a mile in length, is stupendous and imposing. It is as if we lived in a valley amid the Himmalaya mountains, a vale of Cashmere.

There was a fog last night which I think prevented a frost.

8 A. M. — To opposite Pelham's Pond by boat.

Quite cool, with some wind from east and southeast. Took a watermelon for drink. I see many new and perfect upright cobwebs on the sium gone to seed by the side of the river. Now, instead of haying, they are raking cranberries all along the river. The raker moves slowly along with a basket before him, into which he rakes (hauling) the berries, and his wagon stands one side. It is now the middle of the cranberry season. The river has risen about a foot within a week, and now the weeds in midstream have *generally* disappeared, washed away or drowned. The ranunculus stems and leaves are added to the floating wreck. Now our oars leave a broad wake of large bubbles, which are slow to burst. Methinks they are most numerous, large, and slow to burst near the end of a warm and dry spell, and that the water loses some of this tenacity in a rain. But now we have had rain. At any rate on the 4th, just after the first rains (of the 1st and 2d), they would not readily form to the hand. There is such a difference in the state of the water. As we go up the

Clamshell Reach I see the reflections of oaks very much prolonged by the fine ripple. Perhaps it is re-reflected from ripple to ripple. The rainbow portion of the bayonet rush is just covered now by the rise of the river. This cooler morning methinks the jays are heard more. Now that the pontederias have mostly fallen, the polygonums are the most common and conspicuous flowers of the river. The smaller one has not shown more before. I see a stream of small white insects in the air over the side of the river. W. Wheeler is burning his hill by the Corner road, just cut over. I see the scarlet flame licking along the ground, not in a continuous rank, but upright individual tongues of flame, undulating, flashing, forked, — narrow erect waves about the size of a man or boy; next the smoke rising perpendicularly, blue against the pines and fuscous against the sky. Not till high in the sky does it feel the southerly wind. When I look round for those light under sides of the crisped leaves, which were so conspicuous in the drought three weeks and more ago, I see none. Methinks they have not so much flattened out again since the rains, but have fallen, and that thus there are two falls every year. Those leaves which are curled by the drought of July and August apparently fall with the first fall rains, about the first week of September, and those which remain are green as usual and go on to experience their regular October change. The only difference this year will be that there will not be so many leaves for the second fall. The first fall is now over.[1]

[1] For example, on the 17th I see that all those which had changed

Crossing Fair Haven, the reflections were very fine, — not quite distinct, but prolonged by the fine ripples made by an east wind just risen. At a distance, entering the pond, we mistook some fine sparkles, probably of insects, for ducks in the water, they were so large, which when we were nearer, looking down at a greater angle with the surface, wholly disappeared. Some *large-leaved* willow bushes in the meadow southeast of Lee's reflected the light from the under sides of a part of their leaves, as if frost-covered, or as if white asters were mingled with them. We saw but two white lilies on this voyage; they are now done. About a dozen pontederia spikes, no mikania (that is now white or gray), four or five large yellow lilies, and two or three small yellow lilies. The *Bidens Beckii* is drowned or dried up, and has given place to the great bidens, *the* flower and ornament of the riversides at present, and now in its glory, especially at I. Rice's shore, where there are dense beds. It is a splendid yellow — Channing says a lemon yellow — and looks larger than it is (two inches in diameter, more or less). Full of the sun. It needs a name. I see tufts of ferns on the edge of the meadows at a little distance, handsomely tipped on edge with cinnamon brown. Like so many brown fires they light up the meadows. The button-bush everywhere *yellowing*.

We see half a dozen herons in this voyage. Their wings are so long in proportion to their bodies that

on Pine Hill have fallen and many tree-tops, maple and chestnut, are bare.

there seems to be more than one undulation to a wing as they are disappearing in the distance, and so you can distinguish them. You see another begin before the first has ended. It is remarkable how common these birds are about our sluggish and marshy river. We must attract them from a wide section of country. It abounds in those fenny districts and meadow pond-holes in which they delight. A flock of thirteen tell-tales, great yellow-legs, start up with their shrill whistle from the midst of the great Sudbury meadow, and away they *sail in a flock*, — a *sailing* (or skimming) *flock*, that is something rare methinks, — showing their white tails, to alight in a more distant place. We see some small dippers and scare up many ducks, black mostly, which probably came as soon as the earliest. The great bittern, too, rises from time to time, slowly flapping his way along at no great height above the meadow.

The small polygonum is first particularly abundant in the bend above the coreopsis, but it is [in] greatest abundance and perfection at three quarters through the great meadow, in great beds one to three rods wide, very dense and now rising but six or eight inches or so above the water. It is now apparently in perfection. See swallow *like* a barn swallow. Counted twenty haycocks in the great meadow, on staddles, of various forms, — tied round with hay

ropes. They are picturesque objects in the meadow. Little as the river has risen, these meadows are already

wet. The phragmites is still green. Why does not that large typha above the Causeway bear fruit? [1]

Just above the Mill Village Bridge there is an interesting view of Nobscot, clad with wood, up the broad meadows on Larned Brook, which comes in there. Above the Pelham Pond Bridge, a short distance further, we dined; then went on. An interesting view and part of the river, — quite broad at the Great Chestnut house, — and a good land[ing] just before on the left. Went half a mile or more above the Chestnut house. Plenty of hibiscus out of bloom just above the Chestnut house on the west side, and some opposite some elms where we had dined, — all in Wayland.

What is that large, sharply triangular, hollow-sided sedge about four feet high on the north edge of the river in middle of the great meadow? Coarse, grass-like somewhat.[2]

We went up thirteen or fourteen miles at least, and, as we stopped at Fair Haven Hill returning, rowed about twenty-five miles to-day.

Sept. 15. P. M. — To boat under Fair Haven Hill and down river.

Desmodium (?) or lespedeza ticks cover my clothes. I know not when I get them. The witch-hazel has opened since the 8th; say 11th.[3] Its leaves, a third or a half of them, are yellow and brown. *Solidago spe-*

[1] It does. *Vide* July 31, 1859. [2] *Vide* July 31, 1859.

[3] It was abundantly out the 14th (yesterday) on Wachusett Mountain, where it is probably more exposed to the sun and drier. Sophia was there.

ciosa at Clamshell out several days. Goodwin, the one-eyed fisherman, is back again at his old business (and Haynes also). He says he has been to Cape Cod a-haying. He says that their "salt grass cuts about the same with our fresh meadow."

Saw a chewink.

Mrs. Mowatt, the actress, describes a fancy ball in Paris, given by an American millionaire, at which "one lady . . . wore so many diamonds (said to be valued at two hundred thousand dollars) that she was escorted in her carriage by *gendarmes*, for fear of robbery." This illustrates the close connection between luxury and robbery, but commonly the gendarmes are further off.

Sept. 16. Sophia and mother returned from Wachusett. S. saw much bayberry in Princeton.

P. M. — To Fringed Gentian Meadow over Assabet and to Dugan Desert.

I see a wood tortoise in the woods. Why is it there now? One man thinks there are not so many pigeons as last week, that it is too cold for them. There have been a few slight frosts in some places. The clematis is feathered. One *Asclepias Cornuti* begun to discount. I see many hardhacks in the lichen pasture by Tommy Wheeler's which are *leafing* out again *conspicuously*. I see little flocks of chip-birds along the roadside and on the apple trees, showing their light under sides when they rise.

I find the mud turtle's eggs at the Desert all hatched. There is a small hole by which they have made their exit some time before the last rain (of the 14th) and

since I was here on the 4th. There is, however, one still left in the nest. As the eggs were laid the 7th of June, it makes about three months before they came out of the ground. The nest was full of sand and egg-shells. I saw no tracks of the old one. I took out the remaining one, which perhaps could not get out alone, and it began slowly to crawl toward the brook about five rods distant. It went about five feet in as many minutes. At this rate it would have reached the water in a couple of hours at most. Then, being disturbed by my moving, stopped, and, when it started again, retraced its steps, crossed the hole which I had filled, and got into a rut leading toward another part of the brook, about ten rods distant. It climbed directly over some weeds and tufts of grass in its way. Now and then it paused, stretched out its head, looked round, and appeared to be deliberating, waiting for information or listening to its instinct. It seemed to be but a blundering instinct which it obeyed and as if it might be easily turned from its proper course. Yet in no case did it go wholly wrong. Whenever I took it up, it drew in its head and legs, shut its eyes, and remained motionless. It was so slow that I could not stop to watch it, and so carried it to within seven or eight inches of the water, turning its head inland. At length it put out its head and legs, turned itself round, crawled to the water, and endeavored as soon as it entered it to bury itself at the bottom, but, it being sand, it could not. I put it further into the stream, and it was at once carried down head over heels by the current. I think they come out in the night.

Another little sternothærus has come out of the ground since eight this morning (it is now 11 A. M.).[1] The first sternothærus has remained buried in the mud in the tub from the first, and the snapping turtle also for the last few days.

The locust sounds rare now. I make the oak at the southeast corner of the Agricultural Ground to be a scarlet oak, — not yellow-barked; leaf more deeply cut, lighter green, narrower at point; acorn more pointed, its upper scales not recurved off from the acorn like the black.

Sept. 18. *Monday. Viburnum nudum* in flower again. Fringed gentian near Peter's out a short time, but as there is so little, and that has been cut off by the mowers, and this is not the leading stem that blooms, it may after all be earlier than the hazel.[2] I see the potatoes all black with frosts that have occurred within a night or two in Moore's Swamp.

Sept. 19. *Tuesday.* P. M. — To Conantum.

Viburnum Lentago berries now perhaps in prime, though there are but few blue ones.

[1] Another, Sept. 17th, found in morning. Another the 18th, between 8 and 11 A. M. Another the 18th, between 11 A. M. and 1 P. M. Another between 1 and 3 P. M. the 18th. Another found out on the morning of the 19th. Another was dug out the 25th. (All hatched, then, but one egg which I have.)

A snapping turtle had come out on the morning of the 20th, one at least. Another on the morning of the 23d Sept. Another on the morning of the 26th.

[2] Frost-bitten in Hubbard's Close the 21st (or before).

Thinking this afternoon of the prospect of my writing lectures and going abroad to read them the next winter, I realized how incomparably great the advantages of obscurity and poverty which I have enjoyed so long (and may still perhaps enjoy). I thought with what more than princely, with what poetical, leisure I had spent my years hitherto, without care or engagement, fancy-free. I have given myself up to nature; I have lived so many springs and summers and autumns and winters as if I had nothing else to do but *live* them, and imbibe whatever nutriment they had for me; I have spent a couple of years, for instance, with the flowers chiefly, having none other so binding engagement as to observe when they opened; I could have afforded to spend a whole fall observing the changing tints of the foliage. Ah, how I have thriven on solitude and poverty! I cannot overstate this advantage. I do not see how I could have enjoyed it, if the public had been expecting as much of me as there is danger now that they will. If I go abroad lecturing, how shall I ever recover the lost winter?

It has been my vacation, my season of growth and expansion, a prolonged youth.

An upland plover goes off from Conantum top (though with a white belly), uttering a sharp *white, tu white.*

That drought was so severe that a *few* trees here and there — birch, maple, chestnut, apple, oak — have lost nearly all their leaves. I see large flocks of robins with a few flickers, the former keeping up their familiar peeping and chirping.

Many pignuts have fallen. Hardhack is very com-

monly putting forth new leaves where it has lost the old. They are half an inch or three quarters long, and green the stems well. The stone-crop fruit has for a week or more had a purplish or pinkish (?) tinge by the roadside. Fallen acorns in a few days acquire that wholesome shining dark chestnut (?) color. Did I see a returned yellow redpoll fly by?

I saw, some nights ago, a great deal of light reflected from a fog-bank over the river upon Monroe's white fence, making it conspicuous almost as by moonlight from my window.

Scarlet oak acorn (commonly a broader cup with more shelf).[1]

Sept. 20. Windy rain-storm last night.

See to-day quite a flock of what I think must be rusty grackles about the willows and button-bushes.

Sept. 21. *Thursday.* P. M. — To Flint's Pond.

The first frost in our yard last night, the grass white and stiff in the morning. The muskmelon vines are now blackened in the sun. There have been some frosts in low grounds about a week. The forenoon is cold, and I have a fire, but it is a fine clear day, as I find when I come forth to walk in the afternoon, a fine-grained air with a seething or shimmering in it, as I look over the fields, — days which remind me of the Indian summer that is to come. Do not these days always succeed the first frosty mornings?

[1] *Vide* another figure in fall of '58.

The woods generally may now be said to be fairly *beginning* to turn (this with the first noticeable frost). The red maples, especially at a distance, *begin* to light their fires, some turning yellow, and within the woods many oak, *e. g.* scarlet and black and chestnut, and other leaves begin to show their colors. Those leaves of the young white oaks which have changed dull-salmon, crimson, scarlet (many incline to crimson) are mostly within the tree and partially concealed by the green leaves. They are handsomest looking up from below, the light through them.

With this bright, clear, but rather cool air the bright yellow of the autumnal dandelion is in harmony and the heads of the dilapidated goldenrods. The gentian is already frost-bitten [1] almost as soon as it is open. Those pretty little white oak acorn stars of three rays are now quite common on the ground.

Utricularia (the leafless) abundant, and *Lobelia Dortmanna* still out at Flint's Pond. That small erect milfoil is very abundant now. The pond is low near the bathing-rock.

I hear many jays since the frosts began. The nuthatch is common in woods and on street. Hear the chewink and the cluck of the thrasher.

I sometimes seem to myself to owe all my little success, all for which men commend me, to my vices. I am perhaps more willful than others and make enormous sacrifices, even of others' happiness, it may be, to gain my ends. It would seem even as if nothing good could be accomplished without some vice to aid in it.

[1] [A question-mark in pencil is inserted here.]

The leaves of the wild cherry, being sound and entire, are in some places a particularly handsome clear, uniform what you may call *cherry* red, perhaps inclining to crimson, — perhaps like the stain of cherry juice.[1]

I am surprised to see how many leaves in the woods have been apparently eaten through on the edges by some insect, leaving only a faded network of veins there, contrasting with the green centres. In some places almost every leaf of the young white oaks (and black or shrub oak) and chestnuts has this very handsome and regular pale edging as of lace-work. It is about one twelfth of an inch in diameter, and is exceedingly regular, following strictly the outline of the leaf, however cut or lobed, by nature or accident, and preserving the same width. As these leaves (of young oaks, etc.) are commonly several together in one plane disposed ray-wise, — rosettes, — the effect of this edging is enhanced. These young leaves are still of a clear and delicate and now somewhat precious green. The extreme edge is left firm and entire, and the pulp of the leaf is eaten through only just within it.

Sept. 22. Friday. Another hard frost this morning, notwithstanding some fog at same time, and another fine day after it.

P. M. — Over Nawshawtuct.

The river is peculiarly smooth and the water clear and sunny as I look from the stone bridge. A painted tortoise with his head out, outside of the weeds, looks as if resting in the air in that attitude, or suggests

[1] *Vide* Sept. 30.

it, — an angle of forty-five degrees, with head and flippers outstretched. I see no particular effects of frost on the pontederias; they have been falling steadily without regard to it. It would be worth the while to observe all the effects of the first frosts on vegetation, etc., etc.

Celtis berries begin to yellow. As I look off from the hilltop, I wonder if there are any finer days in the year than these. The air is so fine and more bracing, and the landscape has acquired some fresh verdure withal. The frosts come to ripen the year, the days, like fruits, — persimmons.

What if we were to walk by sunlight with equal abstraction and aloofness, yet with equally impartial observation and criticism. As if it shone not for you, nor you for it, but you had come forth into it for the nonce to admire it. By moonlight we are not of the earth earthy, but we are of the earth spiritual. So might we walk by sunlight, seeing the sun but as a moon, a comparatively faint and reflected light, and the day as a brooding night, in which we glimpse some stars still.

Some shrub oak acorns are prettily rayed, green and yellowish. Some white oak ones are turned salmon-color, or blushing like the leaves. Grape leaves in low grounds are frost-bitten and crisped before they have yellowed.[1]

Crossing the hill behind Minott's just as the sun is preparing to dip below the horizon, the thin haze in the atmosphere north and south along the west

[1] *Vide* [p. 52].

horizon reflects a purple tinge and bathes the mountains with the same, like a bloom on fruits. I wonder if this phenomenon is observed in warm weather, or before the frosts have come. Is it not another evidence of the ripe days? I saw it yesterday.

I am surprised to see balls on the scarlet oak. Its acorn and cup are peculiarly top-shaped, the point of the acorn being the bottom. The cup is broader than in the black oak, making a broader shelf about the acorn, and is more pear-shaped or prolonged at top. The acorn is not so rounded, but more tapering at point. And some scarlet oak leaves which I [see] have their two *main* veins and diverging ribs nearly opposite, while in a black oak leaf these veins, and hence lobes, are not nearly opposite.[1]

By moonlight all is simple. We are enabled to erect ourselves, our minds, on account of the fewness of objects. We are no longer distracted. It is simple as bread and water. It is simple as the rudiments of an art, — a lesson to be taken before sunlight, perchance, to prepare us for that.

Sept. 23. P. M. — To Great Meadows *via* Gowing's Swamp.

I was struck with the peculiar and interesting colors of the naked arms of the buttonwood at the brick house, delicate tints seen from the ground, — whitish, greenish, and fawn-colored (?). They look as if recently bared by the scaling off of the old bark. The buttonwoods are in a flourishing condition this year. The first time.

[1] Not general.

My pink azaleas which had lost their leaves in the drought are beginning to leave out again.

The *Helianthus tuberosus* (Jerusalem artichoke) beyond Moore's shows a little yellow, but will not open there for some days yet. Low blackberry vines generally red. There are many lice on birches still, notwithstanding the frosts. The high blueberry bushes scattered here and there, the higher islands in Beck Stow's Swamp, begin to paint it bright-red. Now look out for redness on the face of the earth, such as is seen on the cheek of the sweet viburnum, or as [a] frosty morning walk imparts to a man's face. Very brilliant and remarkable now are the prinos berries, so brilliant and fresh when most things — flowers and berries — have withered. I gather pretty good wild pears near the new road, — now in prime. The *Cornus sericea* bushes along the edge of the Great Meadows are now turned mulberry, and here is an end of its berries then. The hard frosts of the 21st and 22d have put an end to several kinds of plants, and probably berries, for this year. This is the crisis when many kinds conclude their summer.

Bull says it is only the immature leaves of his new grape which are crisped by the frost as yet. Here, on the east edge of the Great Meadows, all the flowering fern is turned brown and withered (I am not sure but it began before the frost), and the common eupatoriums are a very dark brown or black for the same reason. All along the river the upper half of the button-bushes is turned brown and withered in consequence of the frost, while many other plants in their midst are un-

touched. As it began late, it falls early. Its balls are equally browned, and may now be said to be ripened by frost. After those frosts a day's sun revealed what mischief the frost had done by the withering and blackened leaves. Many plants fall with the first frosts, — grapes, button-bushes; what else? Probably some asters and goldenrods.

Monroe has shot a loon to-day.

Sept. 24. *Sunday.* 6 A. M. — To Hill.

Low fog-like veil on meadows.

On the large sassafras trees on the hill I see many of the handsome red club-shaped pedicels left, with their empty cups which have held fruit; and I see one or two elliptical but still green berries. Apparently the rest have ripened and fallen or been gathered by birds already, unless they fell prematurely. Gray says that the berries are dark-blue and ripen in September.

Catnep still in bloom. Hear the flicker note. See a song-sparrow-like bird singing a confused low jingle. Afterward hear from a willow by river a *clear strain* from a *song sparrow!*

Man identifies himself with earth or the material, just as he who has the least tinge of African blood in his veins regards himself as a negro and is identified with that race. Spirit is strange to him; he is afraid of ghosts.

The *Viburnum Lentago* berries now turn blue-black in pocket, as the *nudum* did, which last are now all gone, while the *Lentago* is now just in season.

P. M. — By boat to Grape Cliff.

These are the stages in the river fall: first, the two varieties of yellow lily pads begin to decay and blacken (long ago); second, the first fall rains come after dog-days and raise and cool the river, and winds wash the decaying sparganium, etc., etc., to the shores and clear the channel more or less; third, when the first harder frosts come (as this year the 21st and 22d *inst.*), the button-bushes, which before had attained only a dull mixed yellow, are suddenly bitten, wither, and turn brown, all but the protected parts.

The *first* fall is so gradual as not to make much impression, but the last suddenly and conspicuously gives a fall aspect to the scenery of the river. The button-bushes thus withered, covered still with the gray, already withered mikania, suddenly paint with a rich brown the river's brim. It is like the crust, the edging, of a boy's turnover done brown. And the black willows, slightly faded and crisped with age or heat, enhance my sense of the year's maturity. There, where the land appears to lap over the water by a mere edging, these thinner portions are first done brown. I float over the still liquid middle.

I have not seen any such conspicuous effect of frost as this sudden withering of the button-bushes. The muskrats make haste now to rear their cabins and conceal themselves.

I see still what I take to be small flocks of grackles feeding beneath the covert of the button-bushes and flitting from bush to bush. They seldom expose themselves long. The water begins to be clear of weeds,

and the fishes are exposed. It is now too cold to bathe with comfort, yet the clams have not gone down. The river is still low. I scared up a duck (wood?) (white under side wings), which circled round four times, twice (middle times) high in the air a diameter of a hundred rods, and finally alighted with a long, slanting flight near where it rose. The sumachs (though I have not observed the poison (*venenata*)) are now turned before trees. Green-briar berries ripe, blue-black, or purplish, apparently with the frosts of 21st and 22d. The red maple leaves along the river are much curled and show their whitish under sides even more than a month ago, owing probably to their age as well as the summer's drought (from which last they had partly recovered a fortnight (?) ago).

Saw a warbler which inquisitively approached me creeper-wise along some dead brush twigs. It may have been the pine-creeping warbler, though I could see no white bars on wings. I should say all yellow-olivaceous above; clear lemon-yellow throat and breast —and vent (?); narrow white ring around eye; black bill, straight; clay-colored (?) legs; edge of wings white.

Young hickories, pretty generally, and some black oaks are frost-bitten, but no young white oaks. On the shrub oak plain under Cliffs, the young white oaks are generally now tending to a dull inward red. The *ilicifolia* generally green still, with a few yellowish or else scarlet leaves. The young black oaks with many red, scarlet, or yellowish leaves. The chinquapin pretty generally a clear brilliant dark red. The same with a few twigs of the scarlet oak, but not brilliant, *i. e.*

glossy. The tupelo green, reddish, and brilliant scarlet, all together. The brightest hazel dim vermilion. Some red maple sprouts clear scarlet deepening to purplish. The panicled cornel green with a tinge of reddish purple. Only these young trees and bushes are yet conspicuously changed. The tupelo and the chinquapin the most brilliant of the above. The scarlet oak the clearest red.

But little *bright Solidago nemorosa* is left. It is generally withered or dim.

What name of a natural object is most poetic? That which he has given for convenience whose life is most nearly related to it, who has known it longest and best.

The perception of truth, as of the duration of time, etc., produces a pleasurable sensation.

Sept. 25. P. M. — To boat opposite Bittern Cliff *via* Cliffs.

I suspect that I know on what the brilliancy of the autumnal tints will depend. On the greater or less drought of the summer. If the drought has been uncommonly severe, as this year, I should think it would so far destroy the vitality of the leaf that it would attain only to a dull, dead color in autumn, that to produce a brilliant autumn the plant should be full of sap and vigor to the last.

Do I see an *F. hyemalis* in the Deep Cut? It is a month earlier than last year.

I am detained by the very bright red blackberry leaves strewn along the sod, the vine being inconspicuous. How they spot it!

On the shrub oak plain, as seen from Cliffs, the red *at least* balances the green. It looks like a rich, shaggy rug now, before the woods are changed. I see several smokes in the distance, of burning brush (?). The button-bush leaves are rapidly falling and covering the ground with a rich brown carpet. The pontederias, too, show decidedly the effect of the frost. The river is as low [as] ordinarily in summer, eight or nine inches below the long stone, and the stripe of the bayonet rush, now clear dark pink, eight or nine inches wide, is again exposed. Saw at a distance a fox or an otter withdrawing from the riverside. I think that if that August haze had been much of it smoke, I should have smelt it much more strongly, for I now smell strongly the smoke of this burning half a mile off, though it is scarcely perceptible in the air.

There was a splendid sunset while I was on the water, beginning at the Clamshell reach. All the lower edge of a very broad dark-slate cloud which reached up backward almost to the zenith was lit up through and through with a dun golden fire, the sun being below the horizon, like a furze plain densely on fire, a short distance above the horizon, for there was a clear, pale robin's-egg sky beneath, and some little clouds on which the light fell high in the sky but nearer, seen against the upper part of the distant uniform dark-slate one, were of a fine grayish silver color, with fine mother-o'-pearl tints unusual at sunset (?). The furze gradually burnt out on the lower edge of the cloud, changed into a smooth, hard pale pink vermilion, which gradually faded into a gray satiny pearl, a fine Quaker-color.

All these colors were prolonged in the rippled reflection to five or six times their proper length. The effect was particularly remarkable in the case of the reds, which were long bands of red perpendicular in the water.

Bats come out fifteen minutes after sunset, and then I hear some clear song sparrow strains, as from a fence-post amid snows in early spring.

Sept. 26. Took my last bath the 24th. Probably shall not bathe again this year. It was chilling cold. It is a warm and very pleasant afternoon, and I walk along the riverside in Merrick's pasture. I hear a faint jingle from some sparrows on the willows, etc., — tree or else song sparrows. Many swamp white oak acorns have turned brown on the trees. Some single red maples are very splendid now, the whole tree bright-scarlet against the cold green pines; now, when very few trees are changed, a most remarkable object in the landscape; seen a mile off. It is too fair to be believed, especially seen against the light.[1] Some are a reddish or else greenish yellow, others with red or yellow cheeks. I suspect that the yellow maples had not scarlet blossoms.

The bunches of panicled cornel are purple, though you see much of the gray under sides of the leaves. *Viburnum dentatum* berries still hold on.

Sept. 28. R. W. E.'s pines are parti-colored, preparing to fall, some of them. The sassafras trees on

[1] [*Excursions*, p. 259; Riv. 318.]

the hill are now wholly a bright orange scarlet as seen from my window, and the small ones elsewhere are also changed. Sweet-briar hips ripe.

As I complain that the voyager to arctic regions, in his description of the scenery, does not enough remind the reader directly or indirectly of the peculiar dreariness of the scene or of the perpetual twilight of the arctic night, so he whose theme is moonlight will find it difficult to illustrate it with the light of the moon alone.[1]

Sept. 29. P. M. — To Lee's Bridge *via* Mt. Misery and return by Conantum.

Yesterday was quite warm, requiring the thinnest coat. To-day is cooler. The elm leaves have in *some* places more than half fallen and strew the ground with thick rustling beds, — as front of Hubbard's, — perhaps earlier than usual.[2]

Bass berries dry and brown. Now is the time to gather barberries.

Looking from the Cliffs, the young oak plain is now probably as brightly colored as it will be. The bright reds appear here to be next the ground, the lower parts of these young trees, and I find on descending that it is commonly so as yet with the scarlet oak, which is the brightest. It is the lower half or two thirds which have changed, and this is surmounted by the slender, still green top. In many cases these

[1] [*Excursions*, p. 326; Riv. 401.]

[2] [In the margin against this paragraph the words "The dry year" are written in pencil.]

leaves have only begun to be sprinkled with bloody spots and stains, — sometimes as if one had cast up a quart of blood from beneath and stained them. I now see the effect of that long drought on some young oaks, especially black oaks. Their leaves are in many instances all turned to a clear and uniform brown, having so far lost their vitality, but still plump and full-veined and not yet withered. Many are so affected and, of course, show no bright tints. They are hastening to a premature decay. The tops of many young white oaks which had turned are already withered, apparently by frost.

Saw two either pigeon or sparrow hawks, apparently male and female, the one much larger than the other. I see in *many places* the fallen leaves quite thickly covering the ground in the woods. A large flock of crows wandering about and cawing as usual at this season. I hear a very pleasant and now unusual strain on the sunny side of an oak wood from many — I think *F. hyemalis* (?), though I do not get a clear view of them. Even their slight jingling strain is remarkable at this still season. The catbird still mews. I see two ducks alternately diving in smooth water near the shore of Fair Haven Pond. Sometimes both are under at once. The milkweed down is flying at Clematis Ditch.

This evening is quite cool and breezy, with a prolonged white twilight, quite Septemberish.

When I look at the stars, nothing which the astronomers have said attaches to them, they are so simple and remote. *Their* knowledge is felt to be all terres-

trial and to concern the earth alone. It suggests that the same is the case with every object, however familiar; our so-called knowledge of it is equally vulgar and remote.

One might say that all views through a telescope or microscope were purely visionary, for it is only by his eye and not by any other sense — not by his whole man — that the beholder is there where he is presumed to be. It is a disruptive mode of viewing as far as the beholder is concerned.

Sept. 30. P. M. — *Via* Assabet to the monarda road.

I am surprised to see that *some* red maples, which were so brilliant a day or two ago, have already shed their leaves, and they cover the land and the water quite thickly. I see a countless fleet of them slowly carried round in the still bay by the Leaning Hemlocks.[1] I find a fine tupelo near Sam Barrett's now all turned scarlet. I find that it has borne much fruit — small oval bluish berries, those I see — and a very little not ripe is still left. Gray calls it blackish-blue. It seems to be contemporary with the sassafras. Both these trees are now particularly forward and conspicuous in their autumnal change. I detect the sassafras by its peculiar orange scarlet half a mile distant. Acorns are generally now turned brown and fallen or falling; the ground is strewn with them and in paths they are crushed by feet and wheels. The white oak ones are dark and the most glossy.

[1] [*Excursions*, p. 267; Riv. 327, 328.]

The clear bright-scarlet leaves of the smooth sumach in many places are curled and drooping, hanging straight down, so as to make a funereal impression, reminding me [of] a red sash and a soldier's funeral. They impress me quite as black crape similarly arranged, the bloody plants.[1]

The conventional acorn of art is of course of no particular species, but the artist might find it worth his while to study Nature's varieties again.

The song sparrow is still about, and the blackbird.

Saw a little bird with a distinct white spot on the wing, yellow about eye, and whitish beneath, which I think must be one of the wrens I saw last spring.

At present the river's brim is no longer browned with button-bushes, for those of their leaves which the frost had touched have already fallen entirely, leaving a thin crop of green ones to take their turn.

[1] [Channing, p. 99.]

II

OCTOBER, 1854

(ÆT. 37)

Oct. 1. The young black birches about Walden, next the south shore, are now commonly clear pale-yellow, very distinct at distance, like bright-yellow white birches, so slender amid the dense growth of oaks and evergreens on the steep shores. The black birches and red maples are the conspicuous trees changed about the pond. Not yet the oaks.

Oct. 7. Went to Plymouth to lecture and survey Watson's grounds. Returned the 15th.

The *Decodon verticillatus* (swamp loosestrife) very abundant, forming isles in the pond on Town Brook on Watson's farm, now turned (methinks it was) a somewhat orange (?) scarlet. Measured a buckthorn on land of N. Russell & Co., bounding on Watson, close by the ruins of the cotton-factory, in five places from the ground to the first branching, or as high as my head. The diameters were 4 feet 8 inches, 4–6, 4–3, 4–2, 4–6. It was full of fruit now *quite* ripe, which Watson plants. The birds eat it.

Saw a small goldenrod in the woods with four very broad rays, a new kind to me. Saw also the English oak; leaf much like our white oak, but acorns large and long, with a long peduncle, and the bark of these

young trees, twenty or twenty-five feet high, quite smooth. Saw moon-seed, a climbing vine. Also the leaf of the ginkgo tree, of pine-needles run together.

Spooner's garden a wilderness of fruit trees.

Russell is not sure but Eaton has described my rare polygonum.

Oct. 16. In the streets the ash and most of the elm trees are bare of leaves; the red maples also for the most part, *apparently*, at a distance. The pines, too, have fallen.

Oct. 19. 7.15 A. M. — To Westminster by cars; thence on foot to Wachusett Mountain, four miles to Foster's, and two miles thence to mountain-top by road.

The country above Littleton (plowed ground) more or less sugared with snow, the first I have seen. We find a little on the mountain-top. The prevailing tree on this mountain, top and all, is apparently the red oak, which toward and on the top is very low and spreading. Other trees and shrubs which I remember on the top are beech, *Populus tremuliformis*, mountain-ash (looking somewhat like sumach), witch-hazel, white and yellow birch, white pine, black spruce, etc., etc. Most of the deciduous woods *look as if* dead. On the sides, beside red oak, are rock maple, yellow birch, lever-wood, beech, chestnut, shagbark, hemlock, striped maple, witch-hazel, etc., etc.

With a glass you can see vessels in Boston Harbor from the summit, just north of the Waltham hills.

Two white asters, the common ones, not yet quite out

of bloom, — *A. acuminatus* and perhaps *cordifolius* (hearted, with long sharp teeth). The *Geranium Robertianum* in bloom below the woods on the east side.

Oct. 20. Saw the sun rise from the mountain-top. This is the time to look westward. All the villages, steeples, and houses on that side were revealed; but on the east all the landscape was a misty and gilded obscurity. It was worth the while to see westward the countless hills and fields all apparently flat, now white with frost. A little white fog marked the site of many a lake and the course of the Nashua, and in the east horizon the great pond had its own fog mark in a long, low bank of cloud.

Soon after sunrise I saw the pyramidal shadow of the mountain reaching quite across the State, its apex resting on the Green or Hoosac Mountains, appearing as a deep-blue section of a cone there. It rapidly contracted, and its apex approached the mountain itself, and when about three miles distant the whole conical shadow was very distinct. The shadow of the mountain makes some minutes' difference in the time of sunrise to the inhabitants of Hubbardston, within a few miles west.

F. hyemalis, how long?

Saw some very tall and large dead chestnuts in the wood between Foster's and the mountain. Wachusett Pond appeared the best place from which to view the mountain (from a boat). Our host had picked thirty-four bushels of shagbarks last year. *For the most part*

they do not rattle out yet, but it is time to gather them. On account of squirrels now is the time.

Oct. 22. This and the last two days Indian-summer weather, following hard on that sprinkling of snow west of Concord.

Pretty hard frosts these nights. Many leaves fell last night, and the Assabet is covered with their fleets. Now they rustle as you walk through them in the woods. Bass trees are bare. The redness of huckleberry bushes is past its prime. I see a snapping turtle, not yet in winter quarters. The chickadees are picking the seeds out of pitch pine cones.

Oct. 25. On Assabet.

The maples being bare, the great hornet nests are exposed. A beautiful, calm Indian-summer afternoon, the withered reeds on the brink reflected in the water.

Oct. 26. P. M. — To Conantum.

As warm as summer. Cannot wear a thick coat. Sit with windows open. I see considerable gossamer on the causeway and elsewhere. Is it the tree sparrows whose jingles I hear? As the weather grows cooler and the woods more silent, I attend to the cheerful notes of chickadees on their sunny sides. Apple trees are generally bare, as well as bass, ash, elm, maple.

Oct. 28. *Saturday.* The woods begin to look bare, reflected in the water, and I look far in between the stems of the trees under the bank. Birches, which be-

gan to change and fall so early, are still in many places yellow.

Oct. 29. *Sunday.* Detected a large English cherry in Smith's woods beyond Saw Mill Brook by the peculiar *fresh* orange-scarlet color of its leaves, now that almost all leaves are quite dull or withered. The same in gardens. The gooseberry leaves in our garden and in fields are equally and peculiarly fresh scarlet.

Oct. 31. Rain; still warm.

Ever since October 27th we have had remarkably warm and pleasant Indian summer, with frequent frosts in the morning. Sat with open window for a week.

III

NOVEMBER, 1854

(ÆT. 37)

Nov. 1. It is a little cooler.

Nov. 2. *Thursday.* P. M. — By boat to Clamshell.

I suspect the clams are partly gone down. May not this movement contribute to compel the muskrats to erect their cabins nearer the brink or channel, in order still to be near their food? Other things being equal, they would have to swim further than before to get the clams in the middle, but now, in addition, the water is beginning to rise and widen the river.

I see larks hovering over the meadow and hear a faint note or two, and a pleasant note from tree sparrows (?).

Sailing past the bank above the railroad, just before a clear sundown, close to the shore on the east side I see a second fainter shadow of the boat, sail, myself, and paddle, etc., directly above and upon the first on the bank. What makes the second? At length I discovered that it was the reflected sun which cast a higher shadow like the true one. As I moved to the west side, the upper shadow rose, grew larger and less perceptible; and at last when I was so near the west shore that I could not see the reflected sun, it disappeared; but then there appeared one upside down in its place!

Nov. 4. Saw a shrike in an apple tree, with apparently a worm in its mouth. The shad-bush buds have expanded into small leafets already. This while surveying on the old Colburn farm.

Nov. 5. *Sunday.* To White Pond with Charles Wheeler.

Passing the mouth of John Hosmer's hollow near the river, was hailed by him and Anthony Wright, sitting there, to come and see where they had dug for money. There was a hole six feet square and as many deep, and the sand was heaped about over a rod square. Hosmer said that it was dug two or three weeks before, that three men came in a chaise and dug it in the night. They were seen about there by day. Somebody dug near there in June, and then they covered up the hole again. He said they had been digging thereabouts from time to time for a hundred years. I asked him why. He said that Dr. Lee, who lived where Joe Barrett did, told him that old Mr. Wood, who lived in a house very near his (Hosmer's), told him that, one night in Captain Kidd's day, three pirates came to his house with a pair of old-fashioned deer-skin breeches, both legs full of coin, and asked leave to bury it in his cellar. He was afraid, and refused them. They then asked for some earthen pots and shovels and a lanthorn, which he let them have. A woman in the house followed the pirates at a distance down the next hollow on the south, and saw them go along the meadow-side and turn up this hollow, and then, being alone and afraid, she returned. Soon after

the men returned with the tools and an old-fashioned hat full of the coin (holding about a quart), which they gave to Wood. He, being afraid, buried it in his cellar, but afterward, becoming a poor man, dug it up and used it. A bailiff made some inquiry hereabouts after the pirates.

Hosmer said that one thing which confirmed the diggers in their belief was the fact that when he was a little boy, plowing one day with his father on the hillside, they found three old-fashioned bottles bottom upward but empty under the plow. Somebody consulted Moll Pitcher, who directed to dig at a certain distance from an apple tree on a line with the bottles, and then they would find the treasure.

I think it is the fox-colored sparrow I see in flocks and hear sing now by wood-sides.

Nov. 6. Surveying on Colburn place.

It is suddenly cold. Pools frozen so as to bear, and ground frozen so that it is difficult, if not impossible, to force down a stake in plowed ground. Was that a fish hawk I saw flying over the Assabet, or a goshawk? White beneath, with slender wings.

Nov. 8. I can still rake clams near the shore, but they are chiefly in the weeds, I think. I see a snipe-like bird by riverside this windy afternoon, which goes off with a sound like creaking tackle.

Nov. 10. P. M. — Sail to Ball's Hill with W. E. C. See where the muskrats have eaten much ponte-

deria root. Got some donacia grubs for Harris, but find no chrysalids. The sight of the masses of yellow hastate leaves and flower-buds of the yellow lily, already four or six inches long, at the bottom of the river, reminds me that nature is prepared for an infinity of springs yet.

Nov. 11. Minott heard geese go over night before last, about 8 P. M. Therien, too, heard them "yelling like anything" over Walden, where he is cutting, the same evening. He cut down a tree with a flying squirrel on it; often sees them. Receive this evening a letter in French and three "ouvrages" from the Abbé Rougette in Louisiana.

Nov. 13. It has rained hard the 11th, 12th, and 13th, and the river is *at last* decidedly rising. On Friday, 10th, it was still at summer level.

Nov. 14. The river is slightly over the meadows. The willow twigs on the right of the Red Bridge causeway are bright greenish-yellow and reddish as in the spring. Also on the right railroad sand-bank at Heywood's meadow. Is it because they are preparing their catkins now against another spring? The first wreck line — of pontederia, sparganium, etc. — is observable.

Nov. 15. The first snow, a mere sugaring which went off the next morning.

Nov. 16. P. M. — Sailed to Hubbard's Bridge.

Almost every muskrat's house is covered by the flood, though they were unusually high, as well as numerous, and the river is not nearly so high as last year. I see where they have begun to raise them another story. A few cranberries begin to wash up, and rails, boards, etc., may now be collected by wreckers.

Nov. 17. Paddled up river to Clamshell and sailed back.

I think it must have been a fish hawk which I saw hovering over the meadow and my boat (a raw cloudy afternoon), now and then sustaining itself in one place a hundred feet or more above the water, intent on a fish, with a hovering or fluttering motion of the wings somewhat like a kingfisher. Its wings were very long, slender, and curved in outline of front edge. I think there was some white on rump. It alighted near the top of an oak within rifle-shot of me and my boat, afterward on the tip-top of a maple by waterside, looking very large.

Nov. 18. Saw sixty geese go over the Great Fields, in one waving line, broken from time to time by their crowding on each other and vainly endeavoring to form into a harrow, honking all the while.

Nov. 20. To Philadelphia. 7 A. M., to Boston; 9 A. M., Boston to New York, by express train, land route.

See the reddish soil (red sandstone?) all through Connecticut. Beyond Hartford a range of rocky hills

crossing the State on each side the railroad, the eastern one very precipitous, and apparently terminating at East Rock at New Haven. Pleasantest part of the whole route between Springfield and Hartford, along the river; perhaps include the hilly region this side of Springfield. Reached Canal Street at 5 P. M., or candle-light.

Started for Philadelphia from foot of Liberty Street at 6 P. M., *via* Newark, etc., etc., Bordentown, etc., etc., Camden Ferry, to Philadelphia, all in the dark. Saw only the glossy panelling of the cars reflected out into the dark, like the magnificent lit façade of a row of edifices reaching all the way to Philadelphia, except when we stopped and a lanthorn or two showed us a ragged boy and the dark buildings of some New Jersey town. Arrive at 10 P. M.; time, four hours from New York, thirteen from Boston, fifteen from Concord. Put up at Jones's Exchange Hotel, 77 Dock Street; lodgings thirty-seven and a half cents per night, meals separate; not to be named with French's in New York; next door to the fair of the Franklin Institute, then open, and over against the Exchange, in the neighborhood of the printing-offices.

Nov. 21. Looked from the cupola of the State-House, where the Declaration of Independence was declared. The best view of the city I got. Was interested in the squirrels, gray and black, in Independence and Washington Squares. Heard that they have, or have had, deer in Logan Square. The squirrels are fed, and live in boxes in the trees in the winter. Fine

view from Fairmount water-works. The line of the hypothenuse of the gable end of Girard College was apparently deflected in the middle six inches or more, reminding me of the anecdote of the church of the Madeleine in Paris.

Was admitted into the building of the Academy of Natural Sciences by a Mr. Durand of the botanical department, Mr. Furness applying to him. The carpenters were still at work adding four stories (!) of galleries to the top. These four (Furness thought all of them, I am not sure but Durand referred to one side only) to be devoted to the birds. It is said to be the largest collection of birds in the world. They belonged to the son of Masséna (Prince of Essling?), and were sold at auction, and bought by a Yankee for $22,000, over all the crowned heads of Europe, and presented to the Academy.[1] Other collections, also, are added to this. The Academy has received great donations. There is Morton's collection of crania, with (I suppose a *cast* from) an Indian skull found in an Ohio mound; a polar bear killed by Dr. Kane; a male moose not so high as the female which we shot; a European elk (a skeleton) about seven feet high, with horns each about five feet long and *tremendously*

[1] [The "Yankee" referred to was Dr. Thomas B. Wilson, once president of the Academy, and the sum named includes the prices of other purchases made by him, chief of which was that of the Gould collection of Australian birds. Fifty thousand francs was the amount paid for the Masséna collection. See Dr. Wilson's amusing account of the transaction as quoted by Mr. Witmer Stone in *The Auk*, 1899, p. 174. The original owners of this collection were General Masséna and his son Victor, Duke of Rivoli and Prince of Essling.]

heavy; grinders, etc., of the *Mastodon giganteum* from Barton County, Missouri; etc., etc. Zinzinger was named as of the geological department.

In Philadelphia and also New York an ornamental tree with bunches of seed-vessels supplying the place of leaves now. I suppose it the ailanthus, or Tree of Heaven. What were those trees with long, black sickle-shaped pods? I did not see Steinhauser's Burd family [1] at St. Stephen's Church. The American Philosophical Society is described as a company of old women.

In the narrow market-houses in the middle of the streets, was struck by the neat-looking women marketers with full cheeks. Furness described a lotus identical with an Egyptian one as found somewhere down the river below Philadelphia; also spoke of a spotted chrysalis which he had also seen in Massachusetts. There was a mosquito about my head at night. Lodged at the United States Hotel, opposite the Girard (formerly United States) Bank.

Nov. 22. Left at 7.30 A. M. for New York, by boat to Tacony and rail *via* Bristol, Trenton, Princeton (near by), New Brunswick, Rahway, Newark, etc. Uninteresting, except the boat. The country very level, — red sandstone (?) sand, — apparently all New Jersey except the northern part. Saw wheat stubble and winter wheat come up like rye. Was that Jamestown-weed with a prickly bur? Seen also in Connecticut.

[1] [A marble group entitled "The Angel of the Resurrection," erected to the memory of the children of Edward Shippen Burd.]

Many Dutch barns. Just after leaving Newark, an extensive marsh, between the railroad and the Kill, full of the *Arundo Phragmites*, I should say, which had been burnt over.

Went to Crystal Palace; admired the houses on Fifth Avenue, the specimens of coal at the Palace, one fifty feet thick as it was cut from the mine, in the form of a square column, iron and copper ore, etc. Saw sculptures and paintings innumerable, and armor from the Tower of London, some of the Eighth Century. Saw Greeley; Snow, the commercial editor of the *Tribune;* Solon Robinson; Fry, the musical critic, etc.; and others. Greeley carried me to the new opera-house, where I heard Grisi and her troupe. First, at Barnum's Museum, I saw the camelopards, said to be one eighteen the other sixteen feet high. I should say the highest stood about fifteen feet high at most (twelve or thirteen ordinarily). The body was only about five feet long. Why has it horns, but for ornament? Looked through his diorama, and found the houses all over the world much alike. Greeley appeared to know and be known by everybody; was admitted free to the opera, and we were led by a page to various parts of the house at different times. Saw at Museum some large flakes of cutting arrowhead stone made into a sort of wide cleavers, also a hollow stone tube, probably from mounds.

Nov. 26. What that little long-sharp-nosed mouse I found in the Walden road to-day? Brown above, gray beneath, black incisors, five toes with claws on

each foot, long snout with small blunt black extremity, many mustachios, eyes far forward, feet light or dirty white, tail $1\frac{1}{2}$ inches long, whole length $3\frac{3}{4}$ inches; on causeway.

Nov. 28. Paddled to Clamshell.

Still very clear and bright as well as comfortable weather. River not so high as on the 16th.

Were those plover which just after sunset flew low over the bank above the railroad and alighted in the opposite meadow, with some white in tails like larks, gray birds, rather heavier than robins?

Nov. 30. P. M. — Sail down river.

No ice, but strong cold wind; river slightly over meadows. Was that large diver which was on the edge of the shore and scooted away down-stream as usual, throwing the water about for a quarter of a mile, then diving, some time afterward flying up-stream over our head, the goosander or red-breasted merganser? It was large, with, I should say, a white breast, long reddish bill, bright-red or pink on sides or beneath, reddish-brown crest, white speculum, upper part of throat dark, lower white with breast.

IV

DECEMBER, 1854

(ÆT. 37)

Dec. 2. Got up my boat and housed it, ice having formed about it.

Dec. 3. *Sunday.* The first snow of consequence fell in the evening, very damp (wind northeast); five or six inches deep in morning, after very high wind in the night.

Snowbirds in garden in the midst of the snow in the afternoon.

Dec. 4. P. M. — Down railroad to Walden.

Walden went down quite rapidly about the middle of November, leaving the isthmus to Emerson's meadow bare. Flint's has been very low all summer. The northeast sides of the trees are thickly incrusted with snowy shields, visible afar, the snow was so damp (at Boston it turned to rain). This had none of the dry delicate powdery beauties of a common first snow.

Already the bird-like birch scales dot the snow.

Dec. 5. *Very* cold last night. Probably river skimmed over in some places. The damp snow with water beneath (in all five or six inches deep and not drifted, notwithstanding the wind) is frozen solid, making a

crust which bears well. This, I think, is unusual at this stage of the winter.

Dec. 6. To Providence to lecture.

I see thick ice and boys skating all the way to Providence, but know not when it froze, I have been so busy writing my lecture; probably the night of the 4th.

In order to go to Blue Hill by Providence Railroad, stop at Readville Station (Dedham Low Plain once), eight miles; the hill apparently two miles east. Was struck with the Providence depot, its towers and great length of brick. Lectured in it.

Went to R. Williams's Rock on the Blackstone with Newcomb and thence to hill with an old fort atop in Seekonk, Mass., on the east side of the Bay, whence a fine view down it. At lecture spoke with a Mr. Clark and Vaughn and Eaton.

After lecturing twice this winter I feel that I am in danger of cheapening myself by trying to become a successful lecturer, *i. e.*, to interest my audiences. I am disappointed to find that most that I am and value myself for is lost, or worse than lost, on my audience. I fail to get even the attention of the mass. I should suit them better if I suited myself less. I feel that the public demand an average man, — average thoughts and manners, — not originality, nor even absolute excellence. You cannot interest them except as you are like them and sympathize with them. I would rather that my audience come to me than that I should go to them, and so they be sifted; *i. e.*, I would rather write books than lectures. That is fine, this coarse.

To read to a promiscuous audience who are at your mercy the fine thoughts you solaced yourself with far away is as violent as to fatten geese by cramming, and in this case they do not get fatter.

Dec. 7. Walked through Olneyville in Johnston, two and a half or three miles west of Providence.

Harris tells me that since he exchanged a duplicate Jesuit Relation for one he had not with the Montreal men, *all* theirs have been burnt. He has two early ones which I have not seen.

Dec. 8. P. M. — Up river and meadow on ice to Hubbard Bridge and thence to Walden.

Winter has come unnoticed by me, I have been so busy writing. This is the life most lead in respect to Nature. How different from my habitual one! It is hasty, coarse, and trivial, as if you were a spindle in a factory. The other is leisurely, fine, and glorious, like a flower. In the first case you are merely getting your living; in the second you live as you go along. You travel only on roads of the proper grade without jar or running off the track, and sweep round the hills by beautiful curves.

Here is the river frozen over in many places, I am not sure whether the fourth night or later, but the skating is hobbly or all hobbled like a coat of mail or thickly bossed shield, apparently sleet frozen in water. Very little smooth ice. How black the water where the river is open when I look from the light, by contrast with the surrounding white, the ice and

snow! A black artery here and there concealed under a pellicle of ice.

Went over the fields on the crust to Walden, over side of Bear Garden. Already foxes have left their tracks. How the crust shines afar, the sun now setting! There is a glorious clear sunset sky, soft and delicate and warm even like a pigeon's neck. Why do the mountains never look so fair as from my native fields?

Dec. 9. Surveying for T. Holden.

A cold morning. What is that green *pipes* on the *side-hill* at Nut Meadow on his land, looking at first like green-briar cut off? [1] It forms a dense bed about a dozen rods along the side of the bank in the woods, a rod in width, rising to ten or twelve feet above the swamp. White Pond mostly skimmed over. The scouring-rush is as large round as a bulrush, forming dense green beds conspicuous and interesting above the snow, an evergreen rush.

C. says he saw three larks on the 5th.

Dec. 10. P. M. — To Nut Meadow.

Weather warmer; snow softened. Saw a large flock of snow buntings (quite white against woods, at any rate), though it is quite warm. Snow-fleas in paths; first I have seen. Hear the small woodpecker's whistle; not much else; only crows and partridges else, and chickadees. How quickly the snow feels the warmer wind! The crust which was so firm and rigid is now suddenly softened and there is much water in the road.

[1] *Equisetum hyemale* (scouring-rush, shave-grass).

Dec. 11. P. M. — To Bare Hill.

C. says he found Fair Haven frozen over last Friday, *i. e.* the 8th.[1] I find Flint's frozen to-day, and how long?

We have now those early, still, clear winter sunsets over the snow. It is but mid-afternoon when I see the sun setting far through the woods, and there is that peculiar clear vitreous greenish sky in the west, as it were a molten gem. The day is short; it seems to be composed of two twilights merely;[2] the morning and the evening twilight make the whole day. You must make haste to do the work of the day before it is dark. I hear rarely a bird except the chickadee, or perchance a jay or crow. A gray rabbit scuds away over the crust in the swamp on the edge of the Great Meadows beyond Peter's. A partridge goes off, and, coming up, I see where she struck the snow first with her wing, making five or six as it were finger-marks.

Dec. 14. P. M. — With C. up north bank of Assabet to bridge.

Good sleighing still, with but little snow. A warm, thawing day. The river is open almost its whole length. It is a beautifully smooth mirror within an icy frame. It is well to improve such a time to walk by it. This strip of water of irregular width over the channel, between broad fields of ice, looks like a polished silver mirror, or like another surface of polished ice, and often is distinguished from the surrounding ice only by its reflections. I have rarely seen any reflections

[1] How much before? [2] [Channing, p. 99.]

— of weeds, willows, and elms, and the houses of the village — so distinct, the stems so black and distinct; for they contrast not with a green meadow but clear white ice, to say nothing of the silvery surface of the water. Your eye slides first over a plane surface of smooth ice of one color to a water surface of silvery smoothness, like a gem set in ice, and reflecting the weeds and trees and houses and clouds with singular beauty. The reflections are particularly simple and distinct. These twigs are not referred to and confounded with a broad green meadow from which they spring, as in summer, but, instead of that dark-green ground, absorbing the light, is this abrupt white field of ice. We see so little open and smooth water at this season that I am inclined to improve such an opportunity to walk along the river, and moreover the meadows, being more or less frozen, make it more feasible than in summer.

I am singularly interested by the sight of the shrubs which grow along rivers, rising now above the snow, with buds and catkins, — the willows, alders, sweet-gale, etc. At our old bathing-place on the Assabet, saw two ducks, which at length took to wing. They had *large* dark heads, dark wings, and clear white breasts. I think they were buffle-headed or spirit ducks.

Dec. 15. Up riverside *via* Hubbard Bath, P. M.

I see again a large flock of what I called buntings on the 10th, also another flock surely not buntings, perhaps *Fringilla linaria*. May they not all be these? How interesting a few clean, dry weeds on the shore

a dozen rods off, seen distinctly against the smooth, reflecting water between ice! I see on the ice, half a dozen rods from shore, a small brown striped grub, and again a black one five eighths of an inch long. The last has apparently melted quite a cavity in the ice. How came they there?

I saw on the 11th an abundance of dried huckleberries on Bare Hill, still holding. They are such as dried ripe prematurely on account of the drought. I do not perceive any sweetness. How handsome the narrow, regularly toothed brown leaves of the sweet-fern now above the snow! — handsome in their sere state! The buds of the bass are pretty now, they are a clear light red on short ash (?) twigs.

Dec. 18. P. M. — Down railroad *via* Andromeda Ponds to river.

Snowed a little finely last night and this forenoon. I see a few squirrels' tracks in the woods and, here and there in one or two places, where a mouse's gallery approached the surface. The powdery surface is broken by it. I am surprised to find in the Andromeda Ponds, especially the westernmost one, north side, an abundance of decodon, or swamp loosestrife. Where a partridge took to wing I find the round red buds of the high blueberry plucked about the swamps.

Dec. 19. P. M. — Skated a half-mile up Assabet and then to foot of Fair Haven Hill.

This is the first tolerable skating. Last night was so cold that the river closed up almost everywhere, and

made good skating where there had been no ice to catch the snow of the night before. First there is the snow ice on the sides, somewhat rough and brown or yellowish spotted where the water overflowed the ice on each side yesterday, and next, over the middle, the new dark smooth ice, and, where the river is wider than usual, a thick fine gray ice, marbled, where there was probably a thin ice yesterday. Probably the top froze as the snow fell. I am surprised to find how rapidly and easily I get along, how soon I am at this brook or that bend in the river, which it takes me so long to reach on the bank or by water. I can go more than double the usual distance before dark. It takes a little while to learn to trust the new black ice. I look for cracks to see how thick it is.

Near the island I saw a muskrat close by swimming in an open reach. He was always headed up-stream, a great proportion of the head out of water, and his whole length visible, though the root of the tail is about level with the water. Now and then he [stopped] swimming and floated down-stream, still keeping his head pointed up with his tail. It is surprising how dry he looks, as if that back was never immersed in the water.

It is apt to be melted at the bridges about the piers, and there is a flow of water over the ice there. There is a fine, smooth gray marbled ice on the bays, which apparently began to freeze when it was snowing night before last. There is a marbling of dark where there was clear water amid the snow. Now and then a crack crosses it, and the water, oozing out, has frozen on

each side of it two or three inches thick, and sometimes as many feet wide. These give you a slight jolt.

Off Clamshell I heard and saw a large flock of *Fringilla linaria* over the meadow. No doubt it was these I saw on the 15th. (But I saw then, and on the 10th, a larger and whiter bird also; may have been the bunting.) Suddenly they turn aside in their flight and dash across the river to a large white birch fifteen rods off, which plainly they had distinguished so far. I afterward saw many more in the Potter swamp up the river. They were commonly brown or dusky above, streaked with yellowish white or ash, and more or less white or ash beneath. Most had a crimson crown or frontlet, and a few a crimson neck and breast, very handsome. Some with a bright-crimson crown and clear-white breasts. I suspect that these were young males. They keep up an incessant twittering, varied from time to time with some mewing notes, and occasionally, for some unknown reason, they will all suddenly dash away with that universal loud note (twitter) like a bag of nuts. They are busily clustered in the tops of the birches, picking the seeds out of the catkins, and sustain themselves in all kinds of attitudes, sometimes head downwards while about this. Common as they are now, and were winter before last, I saw none last winter.

Dec. 20. 7 A. M. — To Hill.

Said to be the coldest morning as yet. The river appears to be frozen everywhere. Where was water

last night is a firm bridge of ice this morning. The snow which has blown on to the ice has taken the form of regular star-shaped crystals, an inch in diameter. Sometimes these are arranged in a spear three feet long quite straight. I see the mother-o'-pearl tints now, at sunrise, on the clouds high over the eastern horizon before the sun has risen above the low bank in the east. The sky in the eastern horizon has that same greenish-vitreous, gem-like appearance which it has at sundown, as if it were of perfectly clear glass, — with the green tint of a large mass of glass. Here are some crows already seeking their breakfast in the orchard, and I hear a red squirrel's reproof. The woodchoppers are making haste to their work far off, walking fast to keep warm, before the sun has risen, their ears and hands well covered, the dry, cold snow squeaking under their feet. They will be warmer after they have been at work an hour.

P. M. — Skated to Fair Haven with C.

C.'s skates are not the best, and beside he is far from an easy skater, so that, as he said, it was killing work for him. Time and again the perspiration actually dropped from his forehead on to the ice, and it froze in long icicles on his beard. Yet he kept up his spirits and his fun, said he [had] seen much more suffering than I, etc., etc.

It has been a glorious winter day, its elements so simple, — the sharp clear air, the white snow everywhere covering the earth, and the polished ice. Cold as it is, the sun seems warmer on my back even than

in summer, as if its rays met with less obstruction. And then the air is so beautifully still; there is not an insect in the air, and hardly a leaf to rustle. If there is a grub out, you are sure to detect it on the snow or ice. The shadows of the Clamshell Hills are beautifully blue as I look back half a mile at them, and, in some places, where the sun falls on it, the snow has a pinkish tinge. I am surprised to find how fast the dog can run in a straight line on the ice. I am not sure that I can beat him on skates, but I can turn much shorter. It is very fine skating for the most part. All of the river that was not frozen before, and therefore not covered with snow on the 18th, is now frozen quite smoothly; but in some places for a quarter of a mile it is uneven like frozen suds, in rounded pancakes, as when bread spews out in baking. At sundown or before, it begins to belch. It is so cold that only in one place did I see a drop of water flowing out on the ice.

Dec. 21. P. M. — To Walden and Fair Haven Ponds and down river.

It snowed slightly this morning, so as to cover the [ground] half an inch deep. Walden is frozen over, apparently about two inches thick. It must have frozen, the whole of it, since the snow of the 18th, — probably the night of the 18th. It is very thickly [covered with] what C. calls ice-rosettes, *i. e.* those small pinches of crystallized snow, — as thickly as if it had snowed in that form. I think it is a sort of hoar frost on the ice. It was all done last night, for we see them thickly clus-

tered about our skate-tracks on the river, where it was quite bare yesterday.

We are tempted to call these the finest days of the year. Take Fair Haven Pond, for instance, a perfectly level plain of white snow, untrodden as yet by any fisherman, surrounded by snow-clad hills, dark evergreen woods, and reddish oak leaves, so pure and still. The last rays of the sun falling on the Baker Farm reflect a clear pink color. I see the feathers of a partridge strewn along on the snow a long distance, the work of some hawk perhaps, for there is no track.

What a grovelling appetite for profitless jest and amusement our countrymen have! Next to a good dinner, at least, they love a good joke, — to have their sides tickled, to laugh sociably, as in the East they bathe and are shampooed. Curators of lyceums write to me: —

Dear Sir, — I hear that you have a lecture of some humor. Will you do us the favor to read it before the Bungtown Institute?

Dec. 24. Some three inches of snow fell last night and this morning, concluding with a fine rain, which produced a slight glaze, the first of the winter. This gives the woods a hoary aspect and increases the stillness by making the leaves immovable even in considerable wind.

Dec. 25. To New Bedford *via* Cambridge.[1]

[1] [The entries for Dec. 25th and 26th are printed in *Daniel Ricketson and his Friends*, edited by Anna and Walton Ricketson, Boston, 1902.]

I think that I never saw a denser growth than the young white cedar in swamps on the Taunton & New Bedford Railroad. In most places it looked as if there was not room for a man to pass between the young trees. That part of the country is remarkably level and wooded. The evergreen prinos very common in the low ground. At New Bedford saw the casks of oil covered with seaweed to prevent fire. The weed holds moisture. Town not lively; whalers abroad at this season.

Ricketson has Bewick's "British Birds," two vols.;
" "Æsop's Fables," one vol.;
" "Select Fables," one vol., larger (partly the same);
" "Quadrupeds," one vol.

Has taken some pains to obtain them. The tail-pieces were the attraction to him. He suggested to Howitt to write his "Abodes of the Poets." [1]

Dec. 26. At Ricketson's.

I do not remember to have ever seen such a day as this in Concord. There is no snow here (though there has been excellent sleighing at Concord since the 5th), but it is very muddy, the frost coming out of the ground as in spring with us. I went to walk in the woods with R. It was wonderfully warm and pleasant, and the cockerels crowed just as in a spring day at home. I felt the winter breaking up in me, and if I had been at home I should have tried to write poetry. They told me that this was not a rare day there, that they

[1] [*Homes and Haunts of the British Poets.*]

had little or no winter such as we have, and it was owing to the influence of the Gulf Stream, which was only sixty miles from Nantucket at the nearest, or one hundred and twenty miles from them. In midwinter, when the wind was southeast or even southwest, they frequently had days as warm and debilitating as in summer. There is a difference of about a degree in latitude between Concord and New Bedford, but far more in climate.

The American holly is quite common there, with its red berries still holding on, and is now their Christmas evergreen. I heard the larks sing strong and sweet, and saw robins. R. lives in that part of New Bedford three miles north of the town called the Head of the River, *i. e.* the Acushnet River. There is a Quaker meeting-house there. Such an ugly shed, without a tree or bush about it, which they call their meeting-house (without steeple, of course) is altogether repulsive to me, like a powder-house or grave. And even the quietness and perhaps unworldliness of an aged Quaker has something ghostly and saddening about it, as it were a mere preparation for the grave.

R. said that pheasants from England (where they are not indigenous) had been imported into Naushon and were now killed there.

Dec. 27. To Nantucket *via* Hyannis in misty rain. On Cape Cod saw the hills through the mist covered with cladonias. A head wind and rather rough passage of three hours to Nantucket, the water being thirty miles over. Captain Edward W. Gardiner (where I

spent the evening) thought there was a beach at Barnegat similar to that at Cape Cod. Mr. Barney, formerly a Quaker minister there, who was at Gardiner's, told of one Bunker of Nantucket in old times, "who had eight sons, and steered each in his turn to the killing of a whale." Gardiner said you must have been a-whaling there before you could be married, and must have struck a whale before you could dance. They do not think much of crossing from Hyannis in a small boat, — in pleasant weather, that is, — but they can safely do it. A boy was drifted across thus in a storm in a rowboat about two years ago. By luck he struck Nantucket. The outline of the island is continually changing. The whalers now go chiefly to Behring's Straits, and everywhere between 35 N. and S. latitude and catch several kinds of whales. It was Edmund Gardiner of New Bedford (a relative of Edward's) who was carried down by a whale, and Hussey of Nantucket who, I believe, was one to draw lots to see who should be eaten. As for communication with the mainland being interrupted, Gardiner remembers when thirty-one mails were landed at once, which, taking out Sundays, made five weeks and one day. The snow ten days ago fell about two inches deep, but melted instantly.

At the Ocean House I copied from William Coffin's Map of the town (1834) this: 30,590 acres, including 3 isles beside. 1050 are fresh ponds; about 750, peat swamp. Clay in all parts. But only granite or gneiss boulders.

Dec. 28. A misty rain as yesterday. Captain Gar-

diner carried me to Siasconset in his carriage. He has got from forty to forty-five or fifty bushels of corn to an acre from his land. Wished to know how to distinguish guinea cocks from guinea hens. He is extensively engaged in raising pines on the island. There is not a tree to be seen, except such as are set out about houses. The land is worth commonly from a dollar to a dollar and a half. He showed me several lots of his, of different ages, — one tract of three hundred acres sown in rows with a planter, where the young trees, two years old, were just beginning to green the ground, — and I saw one of Norway pine and our pitch mixed, eight years old, which looked quite like a forest at a distance. The Norway pines had grown the fastest, with a longer shoot, and had a bluer look at a distance, more like the white pine. The American pitch pines have a reddish, crisped look at top. Some are sown in rows, some broadcast. At first he was alarmed to find that the ground moles had gone along in the furrows directly under the plants and so injured the roots as to kill many of the trees, and he sowed over again. He was also discouraged to find that a sort of spindle-worm had killed the leading shoot of a great part of his neighbors' older trees. These plantations must very soon change the aspect of the island. His common pitch pine seed, obtained from the Cape, cost him about twenty dollars a bushel at least, about a dollar a quart, with the wings, and they told him it took about eighty bushels of cones to make one such bushel of seeds. I was surprised to hear that the Norway pine seed without the wings,

imported from France, had cost not quite $200 a bushel delivered at New York or Philadelphia. He has ordered eight hogsheads (! ! !) of the last, clear wingless seeds, at this rate. I *think* he said it took about a gallon to sow an acre. He had tried to get white pine seed, but in vain. The cones had not contained any of late (?). This looks as if he meant to sow a good part of the island, though he said he might sell some of the seed. It is an interesting enterprise.

Half-way to Siasconset I saw the old corn-hills where they had formerly cultivated, the authorities laying out a new tract for this purpose each year. This island must look exactly like a prairie, except that the view in clear weather is bounded by the sea. Saw crows, saw and heard larks frequently, and saw robins; but most abundant, running along the ruts or circling about just over the ground in small flocks, what the inhabitants call snowbirds, a gray bunting-like bird about the size of the snow bunting. Can it be the seaside finch? or the Savannah sparrow? or the shore lark?

Gardiner said that they had pigeon, hen, and other hawks, but there are no places for them to breed; also owls, which must breed, for he had seen their young. A few years ago some one imported a dozen partridges from the mainland, but, though some were seen for a year or two, not one had been seen for some time, and they were thought to be extinct. He thought the raccoons, which had been very numerous, might have caught them. In Harrison days some coons were imported and turned loose, and they multiplied

very fast and became quite a pest, killing hens, etc., and were killed in turn. Finally they turned out and hunted them with hounds and killed seventy-five at one time, since which he had not heard of any. There were foxes once, but none now, and no indigenous animal bigger than a "ground mole."

The nearest approach to woods that I saw was the swamps, where the blueberries, maples, etc., are higher than one's head. I saw, as I rode, high blueberry bushes and maple in the swamps, huckleberries, shrub oaks, uva-ursi (which he called mealy plum), gaultheria, beach plum, clethra, mayflower (well budded). Also withered poverty-grass, goldenrods, asters. In the swamps are cranberries, and I saw one carting the vines home to set out, which also many are doing. G. described what he made out to be "star-grass" as common.

Saw at Siasconset perhaps fifty little houses, but almost every one empty. Saw some peculiar horse-carts for conveying fish up the bank, made like a wheelbarrow, with a whole iron-bound barrel for the wheel, a rude square box for the body, resting on the shafts, and the horse to draw it after him. The barrel makes a good wheel in the sand. They may get seaweed in them. A man asked thirty-seven cents for a horse-cart-load of seaweed carried a quarter of a mile from the shore. G. pointed out the house of a singular old hermit and genealogist, over seventy years old, who, for thirty years *at least*, has lived alone and devoted his thoughts to genealogy. He knows the genealogy of the whole island, and a relative supports him by

making genealogical charts from his dictation for those who will pay for them. He at last lives in a very filthy manner, and G. helped clean his house when he was absent about two years ago. They took up three barrels of dirt in his room.

Ascended the lighthouse at Sancoty Head. The mist still prevented my seeing off and around the island. I saw the eggs (?) of some creature in dry masses as big as my fist, like the skins of so many beans, on the beach. G. told me of a boy who, a few years since, stole near to some wild geese which had alighted, and, rushing on them, seized two before they could rise, and, though he was obliged to let one go, secured the other.

Visited the museum at the Athenæum. Various South Sea implements, etc., etc., brought home by whalers.

The last Indian, not of pure blood, died this very month, and I saw his picture with a basket of huckleberries in his hand.

Dec. 29. Nantucket to Concord at 7.30 A. M.

Still in mist. The fog was so thick that we were lost on the water; stopped and sounded many times. The clerk said the depth varied from three to eight fathoms between the island and Cape. Whistled and listened for the locomotive's answer, but probably heard only the echo of our own whistle at first, but at last the locomotive's whistle and the life-boat bell.

I forgot to say yesterday that there was at one place an almost imperceptible rise not far west of Siasconset,

to a slight ridge or swell running from Tom Never's Head northward to (John) Gibbs's Swamp. This conceals the town of Nantucket. (John Gibbs was the name of the Indian Philip came after.) This, seen a mile off through the mist which concealed the relative distance of the base and summit, appeared like an abrupt hill, though an extremely gradual swell.

At the end of Obed Macy's History of Nantucket are some verses signed "Peter Folger, 1676." As for the sin which God would punish by the Indian war, —

> "Sure 't is not chiefly for those sins
> that magistrates do name,"

but for the sin of persecution and the like, the banishing and whipping of godly men.

> "The cause of this their suffering
> was not for any sin,
> But for the witness that they bare
> against babes sprinkling.
>
> . . . . . .
>
> "The church may now go stay at home,
> there's nothing for to do;
> Their work is all cut out by law,
> and almost made up too.
>
> . . . . . .
>
> "'T is like that some may think and say,
> our war would not remain,
> If so be that a thousand more
> of natives were but slain.

"Alas! these are but foolish thoughts;
God can make more arise,
And if that there were none at all,
He can make war with flies."

Dec. 31. P. M. — On river to Fair Haven Pond.

A beautiful, clear, not very cold day. The shadows on the snow are indigo-blue. The pines look very dark. The white oak leaves are a cinnamon-color, the black and red (?) oak leaves a reddish brown or leather-color. I see mice and rabbit and fox tracks on the meadow. Once a partridge rises from the alders and skims across the river at its widest part just before me; a fine sight. On the edge of A. Wheeler's cranberry meadow I see the track of an otter made since yesterday morning. How glorious the perfect stillness and peace of the winter landscape!

V

JANUARY, 1855

(ÆT. 37)

Jan. 1. P. M. — Skated to Pantry Brook with C. All the tolerable skating was a narrow strip, often only two or three feet wide, between the frozen spew and the broken ice of the middle.

Jan. 2. I see, in the path near Goose Pond, where the rabbits have eaten the bark of smooth sumachs and young locusts rising above the snow; also barberry. Yesterday we saw the pink light on the snow within a rod of us. The shadow of the bridges, etc., on the snow was a dark indigo blue.

Jan. 4. To Worcester to lecture.

Visited the Antiquarian Library of twenty-two or twenty-three thousand volumes. It is richer in pamphlets and newspapers than Harvard. One alcove contains Cotton Mather's library, chiefly theological works, reading which exclusively you might live in his days and believe in witchcraft. Old leather-bound tomes, many of them as black externally as if they had been charred with fire. Time and fire have the same effect. Haven said that the Rev. Mr. Somebody had spent almost every day the past year in that alcove.

Saw after my lecture a young negro who introduced

himself as a native of Africa, Leo L. Lloyd, who lectures on "Young Africa!!" I never heard of anything but old Africa before.

Higginson told me of a simple, strong-minded man named Dexter Broad, who was at my lecture, whom I *should* see.

Jan. 5. A. M. — Walked to Quinsigamond Pond *via* Quinsigamond Village, to southerly end, and returned by Floating Bridge.

Saw the straw-built wigwam of an Indian from St. Louis (Rapids?), Canada, — apparently a half-breed. Not being able to buy straw, he had made it chiefly of dry grass, which he had cut in a meadow with his knife. It was against a bank and partly of earth all round, the straw or grass laid on horizontal poles and kept down by similar ones outside, like our thatching. Makes them of straw often in Canada. Can make one, if he has the straw, in one day. The door, on hinges, was of straw also, put on perpendicularly, pointed at top to fit the roof. The roof steep, six or eight inches thick. He was making baskets wholly of sugar maple; could find no black ash. Sewed or bound the edge with maple also. Did not look up once while [we] were there. There was a fireplace of stone, oven-like, running out one side and covered with earth. It was the nest of a large meadow mouse. Had he ever hunted moose? When he was down at Green Island. Where was that? Oh, far down, very far! Caught seals there. No books down that way.

Saw men catching minnows for fishing through

large holes in the ice of the Blackstone. At Quinsigamond Village, a Mr. Washburn showed me the wire rolling and drawing mill in which he is concerned. All sorts of scrap iron is first heated to a welding heat in masses of about two hundredweight, then rolled between vast iron rollers in successive grooves till it is reduced to long rods little more than [an] inch in diameter. These are cut up by powerful shears into lengths of about three feet, heated again, and rolled between other rollers in grooves successively of various forms, — square, oval, round, diamond, etc., which part of the work only one man in the concern fully understood and kept secret. It was here rolled and reduced to a large-sized wire maybe three eighths of an inch in diameter, of which screws are made. At this stage, first, it begins to be *drawn*, though it must be heated again in the course of the drawing to restore its ductility. Make a great deal of telegraph-wire, and for pail-bails, etc. About twenty miles of telegraph-wire in a day, of the best Swedish iron for strength. Cannot make so good iron in this country, because we cannot afford to work it over so much, labor being higher. Said they had but few competitors now in making telegraph-wire, all the mills in England being just now engaged in making wire for telegraph between England and Sevastopol. These were the first wheels turned by the Blackstone. Sometimes their great wheel breaks, yielding to the centrifugal force, though it is one man's duty to watch it, and immense masses are thrown through the roof or sides of the building. They commonly hear premonitory symptoms, when all run.

I saw a part of the glowing mass which had been heated to a welding heat, ready to be rolled, but had dropped on its way. I could still trace the outlines of the various scraps which composed it, — screws, bolts, bar iron, an old axe curiously twisted, etc., etc., — all which by mere pressure would have been rolled into a homogeneous mass. It was now in the condition of many a piece of composition, which, however, mere compression would weld together into a homogeneous mass or a continuous rod. Washburn said the workmen were like sailors; their work was exciting and they drank more spirit than other laborers. In hot weather would sometimes drink two quarts of water an hour and sweat as much. If they could not sweat, left off work. Showed me a peculiar coarse yellow sand which they imported from the shore of Long Island, whose quartz, examined by a microscope, was seen to be perfect crystals. This they used on the floor of their furnace to repair and level it when their iron bars had furrowed it. In the cavernous furnace I saw the roof *dripping* with dark stalactites from the mortar and bricks. In one place they boiled the wire in water and vitriol, which cleaned it and ate out grease and other foreign particles. Wire is hard drawn when it is rapidly reduced, *i. e.* from one size to another *much* smaller.

Higginson showed me a new translation of the Vishnu Sarma. Spoke of the autobiography of a felon older than Stephen Burroughs, one Fitch of Revolutionary days.

R. W. E. told [of] Mr. Hill, his classmate, of Bangor,

who was much interested in my "Walden," but relished it merely as a capital satire and joke, and even thought that the survey and map of the pond were not real, but a caricature of the Coast Surveys. Also of Mr. Frost, the botanist, of Brattleboro, who has found five or six new species of lichens thereabouts. George Emerson is aware that he has confounded two black oaks. One is found on Nantucket. Is it not the *Quercus nigra*, and have we not got it in C.?

Jan. 6. P. M. — To Great Meadows.

Saw one of those silver-gray cocoons which are so securely attached by the silk being wound round the leaf-stalk and the twig. This was more than a year old and empty and, having been attached to a red maple shoot, a foot or more above the meadow, it had girdled it just as a wire might, it was so unyielding, and the wood had overgrown it on each side.

What is that small insect with large, slender wings, which I see on the snow or fluttering in the air these days? Also some little black beetles on the ice of the meadow, ten rods from shore.

In many places near the shore the water has overflowed the ice to a great extent and frozen again with water between of a yellowish tinge, in which you see motes moving about as you walk. The skating is for the most part spoiled by a thin, crispy ice on top of the old ice, which is frozen in great crystals and crackles under your feet. This is apparently the puddles produced by the late thaw and rain, which froze thinly while the rest of the water was soaked up. A fine

snow is falling and drifting before the wind over the ice and lodging in shallow drifts at regular intervals.

I see where a woodpecker has drilled a hole about two inches over in a decayed white maple; quite recently, for the chippings are strewn over the ice beneath and were the first sign that betrayed it. The tree was hollow. Is it for a nest next season?[1] There was an old hole higher up.

I see that the locust pods are still closed, or but partially open, but they open wider after lying in my chamber.

Jan. 7. *Sunday.* P. M. — J. P. Brown road and Hubbard's Bridge.

Cloudy and misty. On opening the door I feel a very warm southwesterly wind, contrasting with the cooler air of the house, and find it unexpectedly wet in the street, and the manure is being washed off the ice into the gutter. It is, in fact, a January thaw. The channel of the river is quite open in many places, and in others I remark that the ice and water alternate like waves and the hollow between them. There are long reaches of open water where I look for muskrats and ducks, as I go along to Clamshell Hill. I hear the pleasant sound of running water. I see that black scum on the surface of water above the ice.

The delicious soft, spring-suggesting air, — how it fills my veins with life! Life becomes again credible to me. A certain dormant life awakes in me, and I begin to love nature again. Here is my Italy, my hea-

[1] [Probably for a winter lodging.]

ven, my New England. I understand why the Indians hereabouts placed heaven in the southwest, — the soft south.[1] On the slopes the ground is laid bare and radical leaves revealed, — crowfoot, shepherd's-purse, clover, etc., — a fresh green, and, in the meadow, the skunk-cabbage buds, with a bluish bloom, and the red leaves of the meadow saxifrage; and these and the many withered plants laid bare remind me of spring and of botany.

On the same bare sand is revealed a new crop of arrowheads. I pick up two perfect ones of quartz, sharp as if just from the hands of the maker.

Still birds are very rare. Here comes a little flock of titmice, plainly to keep me company, with their black caps and throats making them look top-heavy, restlessly hopping along the alders, with a sharp, clear, lisping note. There begin to be greenish pools in the fields where there is a bottom of icy snow. I saw what looked like clay-colored snow-fleas on the under side of a stone.

The bank is tinged with a most delicate pink or bright flesh-color — where the *Bœomyces roseus* grows. It is a lichen day. The ground is covered with cetrariæ, etc., under the pines. How full of life and of eyes is the damp bark! It would not be worth the while to die and leave all this life behind one.

The hillsides covered with the bear scrub oak, methinks, are of the deepest red at a distance. The pitch pine tops were much broken by the damp snow last month. I see where the birches which were weighed

[1] [Channing, p. 99.]

down and lay across the road have been cut off; and all their scales and seeds, shaken off by the sleighs, in one spot color the snow like thick sawdust. The sky, seen here and there through the wrack, bluish and greenish and, perchance, with a vein of red in the west, seems like the inside of a shell deserted of its tenant, into which I have crawled.[1]

The willow catkins *began* to peep from under their scales as early as the 26th of last month. Many buds have lost their scales.

Jan. 8. 7.30 A. M. — To river.

Still warm and cloudy, but with a great crescent of clear sky increasing in the north by west. The streets are washed bare down to the ice. It is pleasant to see the sky reflected in the open river-reach, now perfectly smooth.

10 A. M. — To Easterbrooks place *via* old mill site.

It is now a clear warm and sunny day. The willow osiers by the Red Bridge decidedly are not bright now.[2] There is a healthy earthy sound of cock-crowing. I hear a few chickadees near at hand, and hear and see jays further off, and, as yesterday, a crow sitting sentinel on an apple tree. Soon he gives the alarm, and several more take their places near him. Then off they flap with their *caw* of various hoarseness. I see various caterpillars and grubs on the snow and in one place a reddish ant about a third of an inch long walking off. In the swamps you see the mouths of squirrels'

[1] [Channing, pp. 99, 100.] [2] Were too old.

holes in the snow, with dirt and leaves and perhaps pine scales about them. The fever-bush is betrayed by its little spherical buds.

Jan. 9. P. M. — To Conantum.

A cloudy day, threatening snow; wet under foot. How pretty the evergreen radical shoots of the St. John's-wort now exposed, partly red or lake, various species of it. Have they not grown since fall? I put a stone at the end of one to try it. A little wreath of green and red lying along on the muddy ground amid the melting snows. I am attracted at this season by the fine bright-red buds of the privet andromeda, sleeping couchant along the slender light-brown twigs. They look brightest against a dark ground. I notice the pink shoots of low blueberries where they are thick. How handsome now the fertile fronds of the sensitive fern standing up a foot or more on the sides of causeways, the neat pale-brown stipe clothed with rich dark-brown fruit at top, — the pinnæ on one side and slightly curved, — "a one sided spike or raceme," — still full of seed! They look quite fresh though dry and rigid. Walked up on the river a piece above the Holden Swamp, though there were very few places where I could get on to it, it has so melted along the shore and on the meadows. The ice over the channel looks dangerously dark and rotten in spots. The oak leaves are of the various leather-colors. The white oak, which is least so and most curled and withered, has to my eye a tinge of salmon-color or pink in it. The black shrub oak is particularly dark-reddish

and firm. It is the black whose leaves are such a pale brown verging on yellowish, — sometimes reddish, — but well preserved.

This winter I hear the axe in almost every wood of any consequence left standing in the township.

Made a splendid discovery this afternoon. As I was walking through Holden's white spruce swamp, I saw peeping above the snow-crust some slender delicate evergreen shoots very much like the *Andromeda Polifolia*, amid sphagnum, lambkill, *Andromeda calyculata*, blueberry bushes, etc., though there was very little to be seen above the snow. It is, I have little doubt, the *Kalmia glauca* var. *rosmarinifolia* (?), with very delicate evergreen opposite linear leaves, strongly revolute, somewhat reddish-green above, slightly weather-beaten, — imbrowned or ripened by the winter, as it were, its cheeks made ruddy by the cold, — white glaucous beneath, with a yellow midrib (not veined nor mucronated nor alternate like the *Andromeda Polifolia*), on the ends of the twigs, which are sharply two-edged. The blossom-buds quite conspicuous. The whole aspect more tender and yellowish than the *Andromeda Polifolia*.[1] The pretty little blossom-buds arranged crosswise in the axils of the leaves as you look down on them.

What a strong and hearty but reckless, hit-or-miss style had some of the early writers of New England, like Josselyn and William Wood and others elsewhere in those days; as if they spoke with a relish, smacking their lips like a coach-whip, caring more to speak

[1] And green while that is mulberry now. *Vide* Jan. 10.

heartily than scientifically true. They are not to be caught napping by the wonders of Nature in a new country, and perhaps are often more ready to appreciate them than she is to exhibit them. They give you one piece of nature, at any rate, and that is themselves.[1] (Cotton Mather, too, has a rich phrase.) They use a strong, coarse, homely speech which cannot always be found in the dictionary, nor sometimes be heard in polite society, but which brings you very near to the thing itself described. The strong new soil speaks through them. I have just been reading some in Wood's "New England's Prospect." He speaks a good word for New England, indeed will come very near lying for her, and when he doubts the justness of his praise, he brings it out not the less roundly; as who cares if it is not so? we love her not the less for all that. Certainly that generation stood nearer to nature, nearer to the facts, than this, and hence their books have more life in them.

(Sometimes a lost man will be so beside himself that he will not have sense enough to trace back his own tracks in the snow.)

Expressions he uses which you now hear only in kitchens and barrooms, which therefore sound particularly fresh and telling, not book-worn. They speak like men who have backs and stomachs and bowels, with all the advantages and disadvantages that attach to them. Ready to find lions here, some having "heard such terrible roarings," "which must be either Devils or Lions; there being no other creatures which use

[1] [Channing, p. 271.]

to roar." What a gormandizing faith (or belief) he has, ready to swallow all kinds of portents and prodigies! Says the wolves have no joints from head to tail. Most admirable when they most outrage common taste and the rules of composition. Of mosquitoes he says those "that swell with their biting the first year, never swell the second." [1]

Jan. 10. P. M. — To Beck Stow's.

The swamp is suddenly frozen up again, and they are carting home the mud which was dug out last fall, in great frozen masses.

The twigs of the *Andromeda Polifolia*, with its rich leaves turned to a mulberry-color above by the winter, with a bluish bloom and a delicate bluish white, as in summer, beneath, project above the ice, the tallest twigs recurved at top, with the leaves standing up on the upper side like teeth of a rake. The intermingling shades of mulberry brown (?) and bluish bloom and glaucous white make it peculiarly rich, as it lies along the ice frozen in. The leaves uninjured by insects.

Then there is the *Andromeda calyculata*, its leaves (now (?)) appressed to the twigs, pale-brown beneath, reddish above, with minute whitish dots. As I go toward the sun now at 4 P. M., the translucent leaves are lit up by it and appear of a soft red, more or less brown, like cathedral windows, but when I look back from the sun, the whole bed appears merely gray and brown.

The leaves of the lambkill, now recurved, are more

[1] *Vide* forward.

or less reddish. The great buds of the swamp-pink, on the central twig, clustered together, are more or less imbrowned and reddened.

At European Cranberry Swamp, I saw great quantities of the seeds of that low three-celled rush or sedge, about the edge of the pool on the ice, black and elliptical, looking like the droppings of mice, this size: , so thick in many places that by absorbing the sun's heat they had melted an inch or more into the ice.[1] No doubt they are the food of some creatures. Saw a thorn with long thorns and its peculiarly shining varnished twigs.

Cold and blustering as it is, the crows are flapping and sailing about and buffeting one another as usual. It is hard to tell what they would be at.

Jan. 11. P. M. — Skated to Lee's Bridge and Farrar's Swamp — call it Otter Swamp.

A fine snow had just begun to fall, so we made haste to improve the skating before it was too late. Our skates made tracks often nearly an inch broad in the slight snow which soon covered the ice. All along the shores and about the islets the water had broadly overflowed the ice of the meadows, and frequently we had to skate through it, making it fly. The snow soon showed where the water was. It was a pleasant time to skate, so still, and the air so thick with snowflakes that the outline of near hills was seen against it and not against the more distant and higher hills. Single pines stood out distinctly against it in the near horizon.

[1] *Scheuchzeria palustris.*

The ground, which was two thirds bare before, began to gray about Fair Haven Pond, as if it were all rocks. There were many of those grubs and caterpillars on the ice half a dozen rods from shore, some sunk deep into it. This air, thick with snowflakes, making a background, enabled me to detect a very picturesque clump of trees on an islet at Pole Brook, — a red (?) oak in midst, with birches on each side.

Jan. 12. P. M. — To Flint's Pond *via* Minott's meadow.

After a spitting of snow in the forenoon, I see the blue sky here and there, and the sun is coming out. It is still and warm. The earth is two thirds bare. I walk along the Mill Brook below Emerson's, looking into it for some life.

Perhaps what most moves us in winter is some reminiscence of far-off summer. How we leap by the side of the open brooks! What beauty in the running brooks! What life! What society! The cold is merely superficial; it is summer still at the core, far, far within. It is in the cawing of the crow, the crowing of the cock, the warmth of the sun on our backs. I hear faintly the cawing of a crow far, far away, echoing from some unseen wood-side, as if deadened by the springlike vapor which the sun is drawing from the ground. It mingles with the slight murmur of the village, the sound of children at play, as one stream empties gently into another, and the wild and tame are one. What a delicious sound! It is not merely crow calling to crow, for it speaks to me too. I am part of

one great creature with him; if he has voice, I have ears.[1] I can hear when he calls, and have engaged not to shoot nor stone him if he will caw to me each spring. On the one hand, it may be, is the sound of children at school saying their a, b, ab's, on the other, far in the wood-fringed horizon, the cawing of crows from their blessed eternal vacation, out at their long recess, children who have got dismissed! While the vaporous incense goes up from all the fields of the spring — if it were spring. Ah, bless the Lord, O my soul! bless him for wildness, for crows that will not alight within gunshot! and bless him for hens, too, that croak and cackle in the yard!

Where are the shiners now, and the trout? I see none in the brook. Have the former descended to the deep water of the river? Ah, may I be there to see when they go down! Why can they not tell me? Or gone into the mud? There are few or no insects for them now.

The strong scent of this red oak, just split and corded, is a slight compensation for the loss of the tree.

How cheering the sight of the evergreens now, on the forest floor, the various pyrolas, etc., fresh as in summer!

What is that mint whose seed-vessels rubbed are so spicy to smell — minty — at the further end of the pond by the Gourgas wood-lot? [2]

On Flint's Pond I find Nat Rice fishing. He has not caught one. I asked him what he thought the best time to fish. He said, "When the wind first comes south after a cold spell, on a bright morning."

[1] [Channing, p. 100.]

[2] Lycopus.

Well may the tender buds attract us at this season, no less than partridges, for they are the hope of the year, the spring rolled up. The summer is all packed in them.

Observed this afternoon the following oak leaves: —

1st, the white oak, the most withered and faded and curled; many spotted with black dot lichens.

2d, the bear scrub, the most firm and fresh-colored and flat.

3d, the black, moderately firm, the darkest above, much curled.

4th, scarlet, firmest after the bear scrub, with much freshness and life; *some* conspicuously red still (unwithered); lobes remarkably distorted.

5th, red, considerably withered and lifeless and worn, thin and faded; some reddish slightly and not inclined to curl.

6th, swamp white, pretty firm and bright, but considerably curled.

7th, I suspect that the small chinquapin is deciduous, for I could not find one leaf in all my walk January 1st, though I looked along the Lupine Wall. Those on the ground are considerably withered, faded, and curled, yet pretty firm.

For color, perhaps all may be called brown, and vary into each other more or less.

The 1st, as both sides are seen, pale-brown with a salmon tinge beneath.

2d, clear reddish-brown, leather-like, above, often paler, whitish or very light beneath, silveryish.

3d, dusky-brown above (not always), clear tawny(?)-brown beneath.

4th, clear pale-brown (except the unfaded red ones), leather-like, very generally reddish, nearly the same both sides.

5th, quite pale brown or slightly reddish, nearly the same both sides; some, prematurely dead, are yellowish.

6th, deep rusty-colored brown, often bright leather-red, silveryish-white beneath.

7th, leaves on ground pale-brown, much like a withered red, but whitish beneath *like* bear shrub.

The oak leaves now resemble the different kinds of calf, sheep, Russia leather, and Morocco (a few scarlet oaks), of different ages.

Jan. 13. Warm and wet, with rain-threatening clouds drifting from southwest. Muddy, wet, and slippery. Surprised to see oak balls on a red oak.

Picked up a pitch pine cone which had evidently been cut off by a squirrel. The successive grooves made by his teeth while probably he bent it down were quite distinct. The woody stem was a quarter of an inch thick, and I counted eight strokes of his chisel.

Jan. 14. Skated to Baker Farm with a rapidity which astonished myself, before the wind, feeling the rise and fall, — the water having settled in the suddenly cold night, — which I had not time to see. Saw the intestines of (apparently) a rabbit, — betrayed by a morsel of fur, — left on the ice, probably the prey of a fox. A man feels like a new creature, a deer, perhaps,

moving at this rate. He takes new possession of nature in the name of his own majesty. There was I, and there, and there, as Mercury went down the Idæan Mountains. I judged that in a quarter of an hour I was three and a half miles from home without having made any particular exertion, — *à la volaille.*

Jan. 15. P. M. — Skated to Bedford.

It had just been snowing, and this lay in shallow drifts or waves on the Great Meadows, alternate snow and ice. Skated into a crack, and slid on my side twenty-five feet.

The river-channel dark and rough with fragments of old ice, — polygons of various forms, — cemented together, not strong.

Jan. 16. To Cambridge and Boston.

Carried to Harris the worms — brown, light-striped — and fuzzy black caterpillars (he calls the first also caterpillars); also two black beetles; all which I have found within a week or two on ice and snow; thickest in a thaw. Showed me, in a German work, plates of the larvæ of dragon-flies and ephemeræ, such as I see — or their cases — on rushes, etc., over water. Says the ant-lion is found at Burlington, Vermont, and *may* be at Concord.

I can buy Indian coats in Milk Street from three and a half to six dollars, depending on the length; also leggins from $1.50 to three or more dollars, also depending on the length.

Saw a Nantucket man, who said that their waters

were not so good as the south side of Long Island to steer in by sounding. Off Long Island it deepened a mile every fathom for at least forty miles, as he had proved, — perhaps eighty; but at Barnegat it was not so.

Jan. 19. 7 A. M. — Yesterday it rained hard all day, washing off the little snow that was left down to the ice, the gutters being good-sized mill-brooks and the water over shoes in the middle of the road.

In the night it turned to snow, which still falls, and now covers the wet ground three or four inches deep. It is a very damp snow or sleet, perhaps mixed with rain, which the strong northwest wind plasters to that side of the trees and houses. I never saw the blue in snow so bright as this damp, dark, stormy morning at 7 A. M., as I was coming down the railroad. I did not have to make a hole in it, but I saw it some rods off in the deep, narrow ravines of the drifts and under their edges or eaves, like the serenest blue of heaven, though the sky was, of course, wholly concealed by the driving snow-storm; suggesting that in darkest storms we may still have the hue of heaven in us.

At noon it is still a driving snow-storm, and a little flock of redpolls is busily picking the seeds of the pigweed, etc., in the garden. Almost all have more or less crimson; a few are very splendid, with their particularly bright crimson breasts. The white on the edge of their wing-coverts is very conspicuous.

P. M. — The damp snow still drives from the northwest nearly horizontally over the fields, while I go with C. toward the Cliffs and Walden. There is

not a single fresh track on the back road, and the aspect of the road and trees and houses is very wintry. Though considerable snow has fallen, it lies chiefly in drifts under the walls. We went through the Spring Woods, over the Cliff, by the wood-path at its base to Walden, and thence by the path to Brister's Hill, and by road home. It was worth the while to see what a burden of damp snow lay on the trees notwithstanding the wind. Pitch pines were bowed to the ground with it, and birches also, and white oaks. I saw one of the last, at least twenty-five feet high, splintered near the ground past recovery. All kinds of evergreens, and oaks which retain their leaves, and birches which do not, up to twenty-five feet or more in height, were bent to the earth, and these novel but graceful curves were a new feature in the woodland scenery. Young white pines often stood draped in robes of purest white, emblems of purity, like a maiden that has taken the veil, with their heads slightly bowed and their main stems slanting to one side, like travellers bending to meet the storm with their heads muffled in their cloaks. The windward side of the wood, and the very tops of the trees everywhere, for the most part, were comparatively bare, but within the woods the whole lower two thirds of the trees were laden with the snowy burden which had sifted down on to them. The snow, a little damp, had lodged not only on the oak leaves and the evergreens, but on every twig and branch, and stood in upright walls or ruffs five or six inches high, like miniature Chinese walls, zigzag over hill and dale, making more conspicuous than ever the

arrangement and the multitude of the twigs and branches; and the trunks also being plastered with snow, a peculiar soft light was diffused around, very unlike the ordinary darkness of the forest, as if you were inside a drift or snow house. This even when you stood on the windward side. In most directions you could not see more than four or five rods into this labyrinth or maze of white arms. This is to be insisted on. On every side it was like a snow-drift that lay loose to that height. They were so thick that they left no crevice through which the eye could penetrate further. The path was for the most part blocked up with the trees bent to the ground, which we were obliged to go round by zigzag paths in the woods, or carefully creep under at the risk of getting our necks filled with an avalanche of snow. In many places the path was shut up by as dense a labyrinth, high as the tree-tops and impermeable to vision, as if there had never been a path there. Often we touched a tree with our foot or shook it with our hand, and so relieved it of a part of its burden, and, rising a little, it made room for us to pass beneath. Often singular portals and winding passages were left between the pitch pines, through [which], stooping and grazing the touchy walls, we made our way. Where the path was open in the midst of the woods, the snow was about seven or eight inches deep. The trunks of the trees so uniformly covered on the northerly side, as happens frequently every winter, and sometimes continuing so for weeks, suggested that this might be a principal reason why the lichens watered by the melting snow

flourished there most. The snow lay in great continuous masses on the pitch pines and the white, not only like napkins, but great white table-spreads and counterpanes, when you looked off at the wood from a little distance. Looking thus up at the Cliff, I could not tell where it lay an unbroken mass on the smooth rock, and where on the trees, it was so massed on the last also. White pines were changed into firs by it, and the limbs and twigs of some large ones were so matted together by the weight that they looked like immense solid fungi on the side of the trees, or those nests of the social grosbeak (?)[1] of Africa which I have seen represented. Some white pine boughs hung down like fans or the webbed feet of birds. On some pitch pines it lay in fruit-like balls as big as one's head, like cocoanuts. Where the various oaks were bent down, the contrast of colors of the snow and oak leaves and the softened tints through the transparent snow — often a delicate fawn-color — were very agreeable.

As we returned over the Walden road the damp, driving snowflakes, when we turned partly round and faced them, hurt our eyeballs as if they had been dry scales.[2]

It may be that the linarias come into the gardens now not only because all nature is a wilderness to-day, but because the woods where the wind has not free play are so snowed up, the twigs are so deeply covered, that they cannot readily come at their food. In many

[1] [The sociable weaver-bird is doubtless referred to.]

[2] [Channing, p. 112.]

places single trees, or clumps of two or three drooping and massed together by the superincumbent weight, made a sort of roof, tent-like, under which you might take shelter. Under one pitch pine, which shut down to the ground on every side, you could not see the sky at all, but sat in a gloomy light as in a tent. We saw only one indistinct, snow-covered trail of an animal. Where are the crows now? I never see them at such a time. The water of yesterday is very high now on the meadows over the ice, but the snow has mingled with it so densely that it is mere slosh now. The channel ice is lifted up by the freshet, and there is dry white snow, but on each side are broad dirty or yellowish green strips of slosh. Whence comes this green color?

One of the first snows of the winter was a similar damp one which lodged on the trees and broke them down. And the sides of woodland roads were strewn with birch-tops which had obstructed the way and which travellers had been obliged to cut off.

There are plenty of those shell-like drifts along the south sides of the walls now. There are countless perforations [1] through which the fine snow drives and blinds you.

It was surprising to see what a burden of snow had lodged on the trees, especially the pitch pines in secluded dells in the woods out of the way of the wind. White oaks also, six inches in diameter and twenty-five feet high, were bent to the ground and sometimes broken or splintered by it. Maybe the white oaks are more flexible than the others, or their leaves are higher

[1] [Channing, p. 112.]

up and they are more slender below. Some are split in the crotch. It lay on the smaller shrubs and bushes through which you walked, like lightest down, only the lightest part sifting down there.

The houses have that peculiarly wintry aspect now on the west side, being all plastered over with snow adhering to the clapboards and half concealing the doors and windows.

The trees were everywhere bent into the path like bows tautly strung, and you had only to shake them with your hand or foot, when they rose up and made way for you. You went winding between and stooping or creeping under them, fearing to touch them, lest they should relieve themselves of their burden and let fall an avalanche or shower of snow on to you. Ever and anon the wind shook down a shower from high trees. You would not have believed there were so many twigs and branches in a wood as were revealed by the snow resting on them; perfect walls of snow; no place for a bird to perch.[1]

Jan. 20. Our lesser redpoll is said to be the same with the European, which is called *Le Sizerin* by Buffon. (This in Bewick.) I heard its mew about the house early this morning before sunrise.

In many instances the snow had lodged on trees yesterday in just such forms as a white napkin or counterpane dropped on them would take, — protuberant in the middle, with many folds and dimples. An ordinary leafless bush supported so much snow

[1] *Vide* 20th and 26th *inst.*

on its twigs — a perfect maze like a whirligig, though not in one solid mass — that you could not see through it. We heard only a few *chic-a-dees*. Sometimes the snow on the bent pitch pines made me think of rams' or elephants' heads, ready to butt you. In particular places, standing on their snowiest side, the woods were incredibly fair, white as alabaster. Indeed the young pines reminded you of the purest statuary, and the stately full-grown ones towering around affected you as if you stood in a titanic sculptor's studio, so purely and delicately white, transmitting the light, their dark trunks all concealed. And in many places, where the snow lay on withered oak leaves between you and the light, various delicate fawn-colored and cinnamon tints, blending with the white, still enhanced the beauty.

A fine, clear day, not very cold.

P. M. — To Conantum and C. Miles place with Tappan.

There was a high wind last night, which relieved the trees of their burden almost entirely, but I may still see the drifts. The surface of the snow everywhere in the fields, where it is hard blown, has a fine grain with low shelves, like a slate stone that does not split well. We cross the fields behind Hubbard's and suddenly slump into dry ditches concealed by the snow, up to the middle, and flounder out again. How new all things seem! Here is a broad, shallow pool in the fields, which yesterday was slosh, now converted into a soft, white, fleecy snow ice, like bread that has spewed out and baked outside the pan. It is like the

beginning of the world. There is nothing hackneyed where a new snow can come and cover all the landscape. The snow lies chiefly behind the walls. It is surprising how much a straggling rail fence detains it, and it forms a broad, low swell beyond it, two or three rods wide, also just beyond the brow of a hill where it begins to slope to the south. You can tell by the ridges of the drifts on the south side of the walls which way the wind was. They all run from north to south; *i. e.*, the common drift is divided into ridges or plaits in this direction, frequently down to the ground between; which separate drifts are of graceful outlines somewhat like fishes, with a sharp ridge or fin gracefully curved, both as you look from one side and down on them, their sides curving like waves about to break. The thin edge of some of these drifts at the wall end, where the air has come through the wall and made an eddy, are remarkably curved, like some shells, even thus, more than once round: I would not have believed it.

The world is not only new to the eye, but is still as at creation; every blade and leaf is hushed; not a bird or insect is heard; only, perchance, a faint tinkling sleigh-bell in the distance.

As there was water on the ice of the river, which the snow converted into slosh, now, frozen, it looks like fleece.

The snow still adheres conspicuously to the northwest sides of the stems of the trees quite up to their summits, with a remarkably sharp edge in that direc-

Snow Statuary

tion, — in a horizontal section like this: It would be about as good as a compass to steer by in a cloudy day or by night. You see where the trees have deposited their load on the snow beneath, making it uneven. Saw suddenly, directly overhead, a remarkable mackerel sky, with peculiarly soft, large flakes, — polyhedrons, — showing the celestial blue between them, soft and duskyish, like new steam. This covered the greater part of the sky. In the zenith, a more leaden blue; in the crevices on the sides, a more celestial. This was just beyond the Holden Swamp. We admired the C. Miles elms, their strong branches now more conspicuous, zigzag or gracefully curved.

We came upon the tracks of a man and dog, which I guessed to be Channing's. Further still, a mile and a half from home, as I was showing to T. under a bank the single flesh-colored or pink apothecium of a bæomyces which was not covered by the snow, I saw the print of C.'s foot by its side and knew that his eyes had rested on it that afternoon. It was about the size of a pin's head. Saw also where he had examined the lichens on the rails. Now the mackerel sky was gone and all was clear again, and I could hardly realize that low, dark stratum far in the east was it, still delighting, perchance, some sailor on the Atlantic, in whose zenith it was, whose sky it occupied.

T. admired much the addition to the red house, with its steep bevelled roof. Thought he should send Mr. Upjohn to see it. The whole house, methought, was well planted, rested solidly on the earth, with its great bank (green in summer) and few stately elms

before, it [was] so much simpler and more attractive than a front yard with its knickknacks. To contrast with this pleasing structure, which is painted a wholesome red, was a modern addition in the rear, perhaps no uglier than usual, only by contrast, — such an outline alone as our carpenters have learned to produce. I see that I cannot draw anything so bad as the reality. So you will often see an ugly new barn beside a pleasing old house.

Causeways are no sooner made than the swamp white oak springs up by their sides, its acorns probably washed there by the freshets.

In Sagard's History I read, "The villager did not wish to hear the Huguenot minister, saying that there was not yet any ivy on the walls of his church, and that ours were all gray with age" (*chenues de vieillesse*). The walls of the Protestant church in their turn have now got some ivy on them, and the villager does not wish to hear the preacher of any new church which has not.

In Bewick's Birds it is said of the night-jar (also called goat-sucker, dor-hawk, or fern owl) (*Caprimulgus Europeus*), — *L'Engoulevent* (Buffon): "When perched the Night-Jar sits usually on a bare twig, its head lower than its tail, and in this attitude utters its jarring note ["by which," he says elsewhere, "it is peculiarly distinguished "].[1] It is likewise distinguished by a sort of buzzing which it makes while on the wing, and which has been compared to the noise caused by the quick rotation of a spinning-wheel, from which, in

[1] [The brackets are Thoreau's.]

some places, it is called the Wheel Bird." "It is seldom seen in the daytime." This last sound is apparently the same which I hear our whip-poor-will make, and which I do not remember to have heard described.[1]

On the sides of dry hills the dried heads of the hardhack, rising above the snow, are very perfect and handsome now. I think it may be owing to the drought of the last summer, which caused them to dry up prematurely, but before they began to be brittle and to crumble. This on the first cladonia pasture of Conantum. I sit there looking up at the mackerel sky and also at the neighboring wood so suddenly relieved of its snowy burden. The pines — mostly white — have at this season a warm brown or yellowish tinge, and the oaks — chiefly young white ones — are *comparatively red.* The black oak I see is more yellowish. You have these colors of the evergreens and oaks in winter for warmth and contrast with the snow.

Seeds are still left on the birches, which, after each new snow, are sprinkled over its surface, apparently to keep the birds supplied with food.

You see where yesterday's snowy billows have broken at last in the sun or by their own weight, their curling edges fallen and crumbled on the snow beneath.

I see the tracks of countless little birds, probably redpolls, where these have run over broad pastures and visited every weed, — johnswort and coarse grasses, — whose oat-like seed-scales or hulls they have scattered about. It is surprising they did not sink deeper in the light snow. Often the impression is so

[1] [Four interrogation-points in pencil follow this.]

faint that they seem to have been supported by their wings.

The pines and oaks in the deepest hollows in the woods still support some snow, but especially the low swamps are half filled with snow to the height of ten feet, resting on the bent underwood, as if affording covert to wolves.

Very musical and even sweet now, like a horn, is the hounding of a foxhound heard now in some distant wood, while I stand listening in some far solitary and silent field.

I doubt if I can convey an idea of the appearance of the woods yesterday, as you stood in their midst and looked round on their boughs and twigs laden with snow. It seemed as if there could have been none left to reach the ground. These countless zigzag white arms crossing each other at every possible angle completely closed up the view, like a light drift within three or four rods on every side. The wintriest prospect imaginable. That snow which sifted down into the wood-path was much drier and lighter than elsewhere.

Jan. 21. 2.30 P. M. — The sky has gradually become overcast, and now it is just beginning to snow. Looking against a dark roof, I detect a single flake from time to time, but when I look at the dark side of the woods two miles off in the horizon, there already is seen a slight thickness or mistiness in the air. In this way, perhaps, may it first be detected.

P. M. — To Andromeda Ponds *via* railroad; return by base of Cliffs.

The snow is turning to rain through a fine hail.

Pines and oaks seen at a distance — say two miles off — are considerably blended and make one harmonious impression. The former, if you attend, are seen to be of a blue or misty black, and the latter form commonly a reddish-brown ground out of which the former rise. These colors are no longer in strong contrast with each other.

Few twigs are conspicuous at a distance like those of the golden willow. The tree is easily distinguished at a distance by its color.

Saw in an old white pine stump, about fifteen inches from the ground, a hole pecked about an inch and a half in diameter. It was about six inches deep downward in the rotten stump and was bottomed with hypnum, rabbit's fur, and hair, and a little dry grass. Was it a mouse-nest? or a nuthatch's, creeper's, or chickadee's nest? [1] It has a slight musky smell.

Jan. 22. Heavy rain in the night and half of to-day, with very high wind from the southward, washing off the snow and filling the road with water. The roads are well-nigh impassable to foot-travellers.

P. M. — To stone bridge, Loring's Pond, Derby's, and Nut Meadow.

It is a good lichen day, for the high wind has strewn the bark over the fields and the rain has made them very bright. In some places for fifteen rods the whole road is like a lake from three to fifteen inches deep. It is very exciting to see, where was so lately only ice

[1] Probably last.

and snow, dark wavy lakes, dashing in furious torrents through the commonly dry channels under the causeways, to hear only the rush and roar of waters and look down on mad billows where in summer is commonly only dry pebbles. Great cakes of ice lodged and sometimes tilted up against the causeway bridges, over which the water pours as over a dam. After their passage under these commonly dry bridges the crowding waters are at least six or eight inches higher than those of the surrounding meadow. What a tumult at the stone bridge, where cakes of ice a rod in diameter and a foot thick are carried round and round by the eddy in circles eight or ten rods in diameter, and rarely get a chance to go down-stream, while others are seen coming up edgewise from below in the midst of the torrent!

The muskrats driven out of their holes by the water are exceedingly numerous, yet many of their cabins are above water on the south branch. Here there are none. We saw fifteen or twenty, at least, between Derby's Bridge and the Tarbell Spring, either swimming with surprising swiftness up or down or across the stream to avoid us, or sitting at the water's edge, or resting on the edge of the ice (one refreshed himself there after its cold swim regardless of us, probed its fur with its nose and scratched its ear like a dog) or on some alder bough just on the surface. They frequently swam toward an apple tree in the midst of the water in the vain hope of finding a resting-place and refuge there. I saw one, looking quite a reddish brown, busily feeding on some plant just at the water's edge, thrust-

ing his head under for it. But I hear the sound of Goodwin's gun up-stream and see his bag stuffed out with their dead bodies.

The radical leaves of the yellow thistle are now very fresh and conspicuous in Tarbell's meadow, the rain having suddenly carried off the snow.

Jan. 23. P. M. — The water is still higher than yesterday. I found [it] just over the Red Bridge road, near the bridge. The willow-row near there is not now bright, but a dull greenish below, with a yard at the ends of the twigs red. The water in many hollows in the fields has suddenly fallen away, run off, or soaked up, leaving last night's ice to mark its height around the edges and the bushes. It has fallen two feet in many cases, leaving sometimes a mere feathery crystallization to supply its place. I was pleased to see the vapor of Sam Barrett's fall and, after, the icy cases of the alder and willow stems below. But the river is higher than ever, especially the North River. I was obliged after crossing Hunt's Bridge to keep on round to the railroad bridge at Loring's before I could recross, it being over the road with a roar like a mill-dam this side the further stone bridge, and I could not get over dry for the feebleness and incontinuity of the fence. In front of G. M. Barrett's was a great curving bay which crossed the road between him and Heywood's, and by Fort Pond Bridge at Loring's it had been over for ten rods in the night. A great cake a foot thick stands on end against the railroad bridge. I do not quite like to see so much bare ground in mid-

winter. The radical leaves of the shepherd's-purse, seen in green circles on the water-washed plowed grounds, remind me of the internal heat and life of the globe, anon to burst forth anew.

Yesterday I met Goodwin shooting muskrats and saw the form and bloody stains of two through his game-bag. He shot such as were close to the shore where he could get them, for he had no dog, the water being too cold, he said. I saw one poor rat lying on the edge of the ice reddened with its blood, half a dozen rods from the shore, which he had shot but was unwilling to wade for.

It is surprising how much work will be accomplished in such a night as the last, so many a brook will have run itself out and now be found reduced within reasonable bounds. This settling away of the water leaves much crackling white ice in the roads.

Jan. 24. I am [reading] William Wood's "New England's Prospect." He left New England August 15th, 1633, and the last English edition referred to in this American one of 1764 is that of London, 1639.

The wild meadow-grasses appear to have grown more rankly in those days. He describes them as "thick and long, as high as a man's middle; some as high as the shoulders." (*Vide* Indian book.)[1] Strawberries too were more abundant and large before they were so cornered up by cultivation, "some being two inches about; one may gather half a bushel in a fore-

[1] [Thoreau's note-book on the Indians is doubtless referred to.]

noon;" and no doubt many other berries were far more abundant, as gooseberries, raspberries, and especially currants, which last so many old writers speak of, but so few moderns find wild. We can perhaps imagine how the primitive wood looked from the sample still left in Maine. He says, "The timber of the country grows strait, and tall, some trees being twenty, some thirty foot high, before they spread forth their branches; generally the trees be not very thick, tho' there be many that will serve for mill-posts, some being three foot and an half over." One would judge from accounts that the woods were clearer than the primitive wood that is left, on account of Indian fires, for he says you might ride a-hunting in most places. "There is no underwood, saving in swamps," which the Indian fires did not burn. (*Vide* Indian book.) "Here no doubt might be good done with saw mills; for I have seene of these stately high grown trees [he is speaking of pines particularly] ten miles together close by the river [probably Charles River][1] side." He says at first "fir and pine," as if the fir once grew in this part of the State abundantly, as now in Maine and further west. Of the oaks he says, "These trees afford much mast for hogs, especially every third year." Does not this imply many more of them than now? "The hornbound tree is a tough kind of wood, that requires so much pains in riving as is almost incredible, being the best to make bowls and dishes, not being subject to crack or leak," and [he] speaks, both in prose and verse, of the vines being particu-

[1] [The brackets are Thoreau's.]

larly inclined to run over this tree. If this is the true hornbeam it was probably larger then, but I am inclined to think it the tupelo, and that it was both larger and more abundant than commonly now, for he says it was good for bowls, and it has been so used since. Of the plums of the country he says, "They be black and yellow, about the bigness of damsons, of a reasonable good taste." Yet Emerson has not found the yellow plum, *i. e.* Canada, growing wild in Massachusetts.

Of quadrupeds no longer found in Concord, he names the lion, — that Cape Ann Lion "which some affirm that they have seen," which may have been a cougar, for he adds, "Plimouth men have traded for Lions skins in former times," — bear, moose, deer, porcupines, "the grim-fac'd Ounce, and rav'nous howling Wolf," and beaver. Martens.

"For Bears they be common, being a black kind of Bear, which be most fierce in strawberry time, at which time they have young ones; at which time likewise they will go upright like a man, and climb trees, and swim to the islands;" etc. (*Vide* Indian book.) In the winter they lie in "the clifts of rocks and thick swamps." The wolves hunt these in packs and "tear him as a Dog will tear a Kid." "They never prey upon the English cattle, or offer to assault the person of any man," unless shot. Their meat "esteemed . . . above venison."

For moose and deer see Indian book.

Complains of the wolf as the great devourer of bear, moose, and deer, which kept them from mul-

tiplying more. "Of these Deer [*i. e.* the small] [1] there be a great many, and more in the Massachusetts-Bay, than in any other place." "Some have killed sixteen Deer in a day upon this island," so called because the deer swam thither to avoid the wolves.[2]

For porcupine and raccoon *vide* Indian book.

Gray squirrels were evidently more numerous than now.

I do not know whether his ounce or wild cat is the Canada lynx [3] or wolverine. He calls it wild cat and does not describe the little wildcat. (*Vide* Indian book.) Says they are accounted "very good meat. Their skins be a very deep kind of fur, spotted white and black on the belly." Audubon and Bachman make the *Lynx rufus* black and white beneath. For wolf *vide* Indian book. He says: "These be killed daily in some places or other. . . . Yet is there little hope of their utter destruction." "Travelling in the swamp by kennels."

Says the beaver are so cunning the English "seldom or never kill any of them, being not patient to lay a long siege" and not having experience.

Eagles are probably less common; pigeons of course (*vide* Indian book); heath cocks all gone (price "four pence"); and turkeys (good cock, "four shillings"). Probably more owls then, and cormorants, etc., etc., sea-fowl generally (of humilities he "killed twelve score at two shots"), and swans. Of pigeons, "Many of them build among the pine trees, thirty miles to the north-east of our plantations; joining nest to nest,

[1] [The brackets are Thoreau's.]

[2] [Deer Island in Boston Harbor.]

[3] Probably this.

and tree to tree by their nests, so that the Sun never sees the ground in that place, from whence the Indians fetch whole loads of them." And then for turkeys, tracking them in winter, or shooting them on their roosts at night. Of the crane, "almost as tall as a man," probably blue heron, — possibly the whooping crane or else the sandhill, — he says, "I have seen many of these fowls, yet did I never see one that was fat, though very sleaky;" neither did I. "There be likewise many Swans, which frequent the fresh ponds and rivers, seldom consorting themselves with ducks and geese; these be very good meat, the price of one is six shillings." Think of that! They had not only brant and common gray wild geese, but "a white Goose," probably the snow goose; "sometimes there will be two or three thousand in a flock;" continue six weeks after Michaelmas and return again north in March. Peabody says of the snow goose, "They are occasionally seen in Massachusetts Bay."

Sturgeon were taken at Cape Cod and in the Merrimack especially, "pickled and brought to England, some of these be 12, 14, and 18 feet long." An abundance of salmon, shad, and bass, —

> "The stately Bass old Neptune's fleeting post,
> That tides it out and in from sea to coast;"

"one of the best fish in the country," taken "sometimes two or three thousand at a set," "some four foot long," left on the sand behind the seine; sometimes used for manure. "Alewives . . . in the latter end of April come up to the fresh rivers to spawn, in such multitudes as is almost incredible, pressing up in such

shallow waters as will scarce permit them to swim, having likewise such longing desire after the fresh water ponds, that no beatings with poles, or forcive agitations by other devices, will cause them to return to the sea, till they have cast their spawn."

"The Oysters be great ones in form of a shoe-horn, some be a foot long; these breed on certain banks that are bare every spring tide. This fish without the shell is so big, that it must admit of a division before you can well get it into your mouth." For lobsters, "their plenty makes them little esteemed and seldom eaten." Speaks of "a great oyster bank" in the middle of Back Bay, just off the true mouth of the Charles, and of another in the Mistick. These obstructed the navigation of both rivers. *Vide* book of facts.

P. M. — To Walden and Andromeda Ponds.

The river is remarkably high for this season. Meeks, the carpenter, said that he could not get home to-night if he could not find Rhoades, with whom he rode into town, for the water was more than a foot deep over half the causeway. This was at 8 P. M.

But the ice is not thick enough on the meadows, so I go to Walden a-skating. Yet, to my surprise, it is thinly frozen over those parts of the river which are commonly open even in the coldest weather (as at Cheney's), probably because, it being spread over the meadows, there is not so much current there now.

On the 19th Walden was covered with slosh four or five inches deep, but the rain of the 22d turned it all to water, — or chiefly, — leaving it pretty smooth

in the main, but at different levels. Under the higher levels are many handsome white figures one to two feet long, where water has flowed, now empty and white, in form of trees or cladonia lichens, very handsome. I saw a meadow full of lambkill turned reddish the other day, which looked quite handsome with the sun on it.

Those Andromeda Ponds are very attractive spots to me. They are filled with a dense bed of the small andromeda, a dull red mass as commonly seen, brighter or translucent red looking toward the sun, grayish looking from it, two feet or more high, as thick as a moss bed, springing out of a still denser bed of sphagnum beneath. Above the general level rise in clumps here and there the panicled andromeda, with brown clustered fruit, and the high blueberry. But I observe that the andromeda does not quite fill the pond, but there is an open wet place, with coarse grass, swamp loosestrife, and some button-bush, about a rod wide, surrounding the whole. Those little hummocks or paps of sphagnum, out of which the andromeda springs, as bouquets are tied up in the same to keep them fresh, are very beautiful. Now, where the frost has touched them, they are hoary protuberances, — perhaps inclining to ridges, now frozen firmly, — green beneath and within; general aspect now perhaps pale withered brownish, the green only driven in a little deeper, spotted with more or less bright reddish stars; where drier, frequently beautiful crimson stars amid the hoary portions; a beautiful soft bed, of a myriad swelling bosoms, out of which the andromeda springs.

I got a load once to stuff into the chinks in a well I was [walling up] — to keep the sand out, but, it being covered, it died, and I believe I only filled the water with motes and worms ever after. A beautiful pale-brown and hoary-red and crimson ground of swelling bosoms. Dr. Harris spoke of this andromeda as a *rare* plant in Cambridge. There was one pond-hole where he had found it, but he believed they had destroyed it now getting out the mud. What can be expected of a town where this is a rare plant? Here is Nature's parlor; here you can talk with her in the *lingua vernacula*, if you can speak it, — if you have anything to say, — her little back sitting-room, her withdrawing, her *keeping* room.

I was surprised to find the ice in the middle of the last pond a beautiful delicate rose-color for two or three rods, deeper in spots. It reminded me of red snow, and may be the same. I tried to think it the blood of wounded muskrats, but it could not be. It extended several inches into the ice, at least, and had been spread by the flowing water recently. As for vegetable pigments, there were button-bushes in and about it. It was this delicate rose tint, with internal bluish tinges like mother-o'-pearl or the inside of a conch. It was quite conspicuous fifteen rods off, and the color of spring-cranberry juice. This beautiful blushing ice! What are we coming to?

Was surprised to see oak-balls on a bear scrub oak. Have them, then, on black, scarlet, red, and bear scrub.

Saw a young (apparently) red oak (it did not taste

bitter) (another in same state has an oak-ball on it!) ten feet high, the ends of whose twigs looked at first sight as if they had been twisted off by some hungry browsing bird, leaving the fibres streaming. These I found were the strong woody fibres of last year's leaf-stalk, standing out white, in some cases two inches in all directions, from the ends of the twigs, in others rolled together like strong twine, and commonly this twine of different leaf-stalks with the flapping of the leaves twisted together; sometimes four or five leaf-stalks' fibres, with wonderful regularity, as if braided, — like braided horse-tails. On other oaks the leaves still remained with their leaf-stalks thus reduced to fibres and twisted together. It was wonderful how they could have become so wonderfully knotted or braided together, but Nature had made up in assiduity for want of skill. In one instance four leaf-stalks, reduced to fine white fibres and rolled and twisted into strong twine, had afterwards been closely braided together for half an inch in length and in the course of it tied twice round the twig. I think it must be that these leaves died (perhaps in the great drought of last year) while their fibres were still strongly united with their twigs and so preserving their flexibility without losing their connection, and so the wind flapping the leaves, which hang short down, has twisted them together and commonly worn out the leaves entirely, without loosening or breaking the tough leaf-stalk.

Here is self-registered the flutterings of a leaf in this twisted, knotted, and braided twine. So fickle and

unpredictable, not to say insignificant, a motion does yet get permanently recorded in some sort. Not a leaf flutters, summer or winter, but its variation and dip and intensity are registered in THE BOOK.

Old Wood in his "New England's Prospect" says, Englishmanlike: "It is thought there can be no better water in the world, yet dare I not prefer it before good beer, as some have done, but any man will choose it before bad beer, whey, or buttermilk. Those that drink it be as healthful, fresh, and lusty, as they that drink beer."

Jan. 25. P. M. — To Andromeda Ponds.

This morning was a perfect hunter's morn, for it snowed about three quarters of an inch last evening, covering land and ice. Is not good skating a sign of snow? In the swamps, however, where there was water oozed out over the ice, there is no snow, but frozen slosh to-day, *i. e.* a rotten, roughish, dull-white ice. It is a rare day for winter, clear and bright, yet warm. The warmth and stillness in the hollows about the Andromeda Ponds are charming. You dispense with gloves. I see mice-tracks in the fields and meadows like this: four together, rabbit-like, four or five inches apart and one and a quarter broad. Are they the same with the ? I think so. I see rabbit-tracks, pretty large, maybe white ones, two feet apart. I suspect that in each case they are com- ing down the page.[1] In the partridge-tracks the side toes are more spread

[1] Yes.

than in crows; and I believe the hind one is not so long. Both trail the middle toe. The partridge-track looks like this: I see the tracks apparently of many hunters that hastened out this morning.

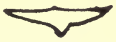
I have come with basket and hatchet to get a specimen of the rose-colored ice. It is covered with snow. I push it away with my hands and feet. At first I detect no rose tint, and suspect it may have disappeared, — faded or bleached out, — or it was a dream. But the surrounding snow and the little body of the ice I had laid bare was what hindered. At length I detect a faint tinge; I cut down a young white oak and sweep bare a larger space; I then cut out a cake. The redness is all about an inch below the surface, the little bubbles in the ice there for half an inch vertically being coated interruptedly within or without with what looks like a minute red dust when seen through a microscope, as if it had dried on. Little balloons, with some old paint almost scaled off their spheres. It has no beauty nor brightness thus seen, [no] more than brick-dust. And this it is which gave the ice so delicate a tinge, seen through that inch of clear white ice. What is it? Can it be blood?

I find an abundance of the seeds of sweet-gale frozen in in windrows on the ice of the river meadows as I return, which were washed out by the freshet. I color my fingers with them. And thus they are planted, then, — somewhat, perhaps, in waving lines, as they wash up. Returning over the fields, the shallow pools made by the rain and thaw, whose water has almost

entirely settled away, — and the ice rests on the ground, — where they are bare of snow, now that the sun is about a quarter of an hour high, looking east are quite green. For a week or two the days have been sensibly longer, and it is quite light now when the five-o'clock train comes in.

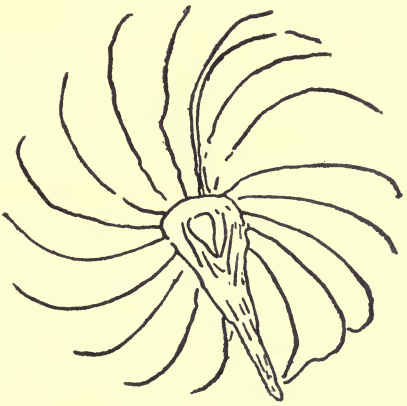
Sagard says of the hares (*lièvres*) of the Huron country, "*Les sapinières* and little woods are the places of their retreat." Such is their taste now. Says the muskrats "feed on *l'herbe* on land and the white of the *joncs* at the bottom of the lakes and rivers."

A pine cone blossoms out now fully in about three days, in the house. They begin to open about halfway up. They are exceedingly regular and handsome; the scales with shallow triangular or crescent-shaped extremities, the prickle pointing downward, are most open above, and are so much recurved at the base of the cone that they lie close together and almost flat there, or at right



End of scale on side of cone.

angles with the stem, like a shield of iron scales, making a perfectly regular figure of thirteen (in one instance) curved rays, thus: — only far more regular.



There are just thirteen rays in each of the three I have!!! These vary in their roundness or the flatness of the cone; so the white pine cones in their length. I find just five such rays (the number of the needles in a fascicle) in each white pine cone I have, and each goes round once. A larch cone has five rows. Four hemlock cones have five each, like white pine, but little twisted.

Jan. 26. This morning it snows again, — a fine dry snow with no wind to speak of, giving a wintry aspect to the landscape.

What a Proteus is our weather! Let me try to remember its freaks. We had remarkably steady sleighing, on a little snow some six inches deep, from the 5th of December all through the month, and some way into January. It came damp and froze up solid. Yet there was none in Boston the while. There was, however, a little rain near the end of December, and occasional slight flurries of snow.

January 6th, after some comparatively pleasant days, there was a raw northerly wind and fine drifting or driving snow in the afternoon, as I walked over the Great Meadows, forming shallow drifts on the ice, but it soon stopped.

January 7th, I was surprised when I opened the door in the afternoon by the warm south wind and sudden softening and melting of the snow. It was a January thaw without rain, the manure beginning to wash off the ice in the streets. The winter's back was broken, and I dreamed of spring, etc., etc.

January 8th, the same. The ice in roads washed bare, the brooks full of melted snow; but it is still clear weather and warm.

January 9. A cloudy day, wet underfoot, threatening snow; difficult to get on to the river; yellow water many rods wide each side over the ice.

January 10. Suddenly cold again and blustering. All waters frozen up. Go on to the swamps, keeping ears covered.

January 11. Make haste to improve the skating in the afternoon, though it is beginning to snow, and the [ice] is soon covered half an inch. Then it stops at night.

January 12. After another slight spitting of snow in the forenoon, it clears up very pleasant and warm in the afternoon, and I walk by the brooks, looking for fish, hearing the crows caw in the horizon and thinking of spring.

January 13. Still warm. In roads, both muddy, wet, and slippery where ice; thick and misty air, threatening rain.

January 14. Clear and cold. All things frozen again. Excellent skating on meadows. Skated to Baker Farm.

January 15. In the forenoon, spit a little snow, making shallow drifts on the ice, through which I skated in the afternoon to Bedford. Stopped snowing.

January 16. Snowed a little again, spoiling the skating.

January 17. Forget.

January 18. Rained hard all day; washed off the little snow left, down to the ice. Stayed in all day. Water

over shoes in the middle of the road. The gutters turned to mill-brooks. Few go out.

January 19. In the night, rain turned to damp snow, which at first made slosh, then for most part prevailed over the water, which ran off underneath; stuck to the houses and trees and made a remarkable winter scene. A driving damp snow with a strong northwest wind all day, lodging on the trees *within* the woods beyond all account. Walked in woods in midst of it to see the pines bent down and the white oaks, etc., and broken. Snowbirds, *i. e.* linarias, in yard. Making drifts by walls.

January 20. Still higher wind in night (snow over), shaking the snow from trees. Now almost bare. Snow seven or eight inches on level in woods, but almost all in drifts under the walls in fields. The sudden-frozen slosh ponds, partly run off, like spewed bread. Hardly bear yet. Not very cold. Go studying drifts. Fine clear weather.

January 21. Becomes overcast at noon. A fine snow spits, then turns to fine hail, then rain, glazing a little.

January 22. Rained all night. Walking now worse than ever this year, midleg deep in gutters. Lakes in the street. River risen, — a freshet, — breaking up ice a foot thick, flows under dry causeway, bridges a torrent; muskrats driven out by hundreds and shot; dark angry waves where was lately ice and snow. Earth washed bare. Radical leaves appear and russet hills. Still rains a *little*.

January 23. Fair weather. Water still rising over the Red Bridge road, though suddenly fallen in many

hollows in fields, leaving thin ice two feet above it around and by clumps. Great work done by brooks last night. Have to go round two or three miles to find a dry causeway. Not strong enough for skating.

January 24. Not strong enough to skate on meadows. Went to Walden. At dusk, snowed three quarters of an inch and spoiled prospect of skating.

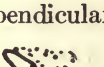
January 25. Clear, bright, and mild. Water still higher than before; over the causeways.

January 26. A fine snow falling, spoiling all prospect of skating on this broad ice. Is not good skating the surest sign of snow or foul weather?

To continue the 26th: —

P. M. — To Walden.

A thick, driving snow, something like, but less than, that of the 19th. There is a strong easterly wind and the snow is very damp. In the deepest hollows on the Brister Hill path it has already lodged handsomely. Suppose you descend into the deepest circular one, far beneath the sweep of the blustering wind, where the flakes at last drop gently to their resting-places. There is a level, white circular floor, indicating ice beneath, and, all around, the white pines, under an accumulating snowy burthen, are hung with drooping white wreaths or fans of snow. The snow on pitch pines takes the forms of large balls, on white pines often of great rolling-pins. Already the trees are bending in all directions into the paths and hollows as here. The birches here are bowed inward to the open circle of the pond-hole, their

tops apparently buried in the old snow. Nothing can be prettier than the snow on the leafless shrub oaks, the twigs are so small and numerous, little snowy arms crossing each other at every imaginable angle, like a whirligig. It is surprising what a burden of snow already rests on little bare twigs hardly bigger than a knitting-needle, both as they stand perpendicularly and horizontally. The great damp flakes come and soon bridge across the interval, even two inches over, between the forks of such twigs where they are horizontal, one sticking to another. It rests on such horizontal twigs commonly in the form of a prism resting on one corner (vertical section where no wind). And in many places, where the wind is felt, the little walls of snow are built out at an angle with the perpendicular, in the direction whence the snow comes:  (a vertical section or end). Damp as it is, it [is] like swan's-down, as if it lay as light as well as thick. As it is with these shrub oaks, so with the largest trees in the stiller parts of the woods, and even the lowest dead limbs of the white pines are not prevented by the upper from bearing their part of the burden.

I am afraid I have not described vividly enough the aspect of that Lodging Snow of the 19th and to-day partly. Imagine the innumerable twigs and boughs of the forest (as you stand in its still midst), crossing each other at every conceivable angle on every side from the ground to thirty feet in height, with each its zigzag wall of snow four or five inches high, so innumerable at different distances one behind another that they completely close up the view like

a loose-woven downy screen, into which, however, stooping and winding, you ceaselessly advance. The wintriest scene, — which perhaps can only be seen in perfection while the snow is yet falling, before wind and thaw begin. Else you miss, you lose, the delicate touch of the master. A coarse woof and warp of snowy batting, leaving no space for a bird to perch.

I see where a partridge has waddled through the snow still falling, making a continuous track. I look in the direction to which it points, and see the bird just skimming over the bushes fifteen rods off.

The plumes of pitch pines are first filled up solid, then they begin to make great snowy *casse-têtes*, or pestles. In the fields the air is thick with driving snow. You can only see a dozen rods into its woof and warp. It fills either this ear or that and your eyes with hard, cutting, blinding scales if you face it. It is forming shelly drifts behind the walls, and stretches in folds across the roads; but in deep, withdrawn hollows in the woods the flakes at last come gently and deviously down, lodging on every twig and leaf, and forming deep and downy and level beds between and on the ice of the pools. The lowermost twigs support not less snow but more.

In many places where you knew there was a thrifty young wood, there appears to be none, for all is bent down and almost completely buried in the snow, and you are stepping over them. The pitch pines are most round-headed, and the young white oaks are most leaved at top, and hence suffer most.

What changes in the aspect of the earth! one day

russet hills, and muddy ice, and yellow and greenish pools in the fields; the next all painted white, the fields and woods and roofs laid on thick. The great sloshy pools in the fields, freezing as they dried away, look like bread that has spewed in the baking, the fungi of a night, an acre in extent; but trust not your feet on it, for the under side is not done; there the principle of water still prevails.

Methinks that after any great storm in winter, whether of snow or rain, the equilibrium of the air is again disturbed and there comes a high wind shaking down the snow and drying up the water.

Jan. 27. Yesterday's driving easterly snow-storm turned to sleet in the evening, and then to rain, and this morning it is clear and pretty cold, the wind westerly, the snow settled to three or four inches on a level, with a frozen crust and some water beneath in many places. It seems as if the sky could not bear to look down on smooth ice, and so made haste to cover it up.

One is educated to believe, and would rejoice if the rising generation should find no occasion to doubt, that the State and the Church are on the side of morality, that the voice of the people is the voice of God. Harvard College was partly built by a lottery. My father tells me he bought a ticket in it. Perhaps she thus laid the foundation of her Divinity School. Thus she teaches by example. New England is flooded with the "Official Schemes of the Maryland State Lotteries," and in this that State is no less unprincipled than in

her slaveholding. Maryland, and every fool who buys a ticket of her, is bound straight to the bottomless pit. The State of Maryland is a moral fungus. Her offense is rank; it smells to heaven. Knowing that she is doing the devil's work, and that her customers are ashamed to be known as such, she advertises, as in the case of private diseases, that "the strictest confidence will be observed." "Consolidated" Deviltry!

P. M. — Up meadow to Cliffs and Walden road.

A cold, cutting southwesterly wind. The crust bears where the snow is very shallow, but lets you through to water in many places on the meadow. The river has not yet fallen much. The muskrats have added to their houses in some places. So they still use them. Started a hare among shrub oaks. It had been squatting in a slight hollow, rather concealed than sheltered. They always look poverty-stricken.

Some ice organ-pipes at the Cliffs. They appear to be formed of successive rings about half an inch thick and diameter lessening with more or less regularity to the point: Sometimes the point split in two. Then the rocks are incased with ice under which water flows, — thin sheets of rippling water frozen as it flowed, — and, with the sun, again apparently thawing beneath and giving room to a new sheet of water, for under the south side of the rocks it melts almost every day.

I came upon a fox's track under the north end of the Cliffs and followed it. It was made last night, after the sleet and probably the rain was over, before it

froze; it must have been at midnight or after. The tracks were commonly ten or twelve inches apart and each one and three quarters or two inches wide. Sometimes there was a longer interval and two feet fell nearer together, as if in a canter. It had doubled directly on its track in one place for a rod or two, then went up the north end of the Cliff where it is low and went along southward just on its edge, ascending gradually. In one place it had made water like a dog, and I perceived the peculiar rank fox odor without stooping. It did not wind round the prominent rocks, but leaped upon them as if to reconnoitre. Its route was for the most part a little below the edge of the Cliff, occasionally surmounting it. At length, after going perhaps half a mile, it turned as if to descend a dozen rods beyond the juniper, and suddenly came to end. Looking closely I found the entrance (apparently) to its hole, under a prominent rock which seemed to lie loose on the top of the ledge and about two feet from the nearest track. By stooping it had probably squeezed under this and passed into its den beneath. I could find no track leading from it.

Their tracks are larger than you would expect, as large as those of a much heavier dog, I should think. What a life is theirs, venturing forth only at night for their prey, ranging a great distance, trusting to pick up a sleeping partridge or a hare, and at home again before morning! With what relish they must relate their midnight adventures to one another there in their dens by day, if they have society! I had never associated that rock with a fox's den, though perhaps I

had sat on it many a time. There are more things in heaven and earth, Horatio, etc., etc. They are the only outlaws, the only Robin Hoods, here nowadays. Do they not stand for gypsies and all outlaws? Wild dogs, as Indians are wild men.

People will tell you of the Cold Winter, clear bright days when for six weeks the eaves did not run once.

As I went through the woods toward the railroad, the sun setting, there were many small violet-colored, *i. e.* lilac-tinted, clouds scattered along the otherwise clear western horizon.

I often see the mincing tracks of a skunk. I came upon the track of a woodchopper, who had gone to his work early this morning across Fair Haven Pond. It suggested his hard work and little pecuniary gain, but simple life and health and contentment. As I took the back track on his trail, comparing his foot and stride with mine, I was startled to detect a slight aberration, as it were sliding in his tread, or as if he had occasionally stopped and made a fresh impress not exactly coincident with the first. In short, I discovered ere long that he had had a companion; perchance they were two thieves trying to pass for one, thought I; but the truth was the second, to save his strength in this long walk to his work through the crusty snow, had stepped with more or less precision in the tracks of his predecessor. The snow was three or four inches deep. I afterwards used the track of a horse in like manner to my advantage; so that my successor might have thought that a sleigh had gone along drawn by a man.

Jan. 28. *Sunday.* Grew warmer toward night and snowed; but this soon turned to heavy rain in the night, which washed all the snow off the ice, leaving only bare ground and ice the county over by next morning.

Jan. 29. Not cold. Sun comes out at noon.

Jan. 30. Clear and not cold, and now fine skating, the river rising again to the height it had attained the 24th, which (with this) I think remarkable for this season. It is now about a foot lower than on the 24th (it had fallen over eighteen inches since then), but is rising. It is unusual for the river to be so much swollen in midwinter, because it is unusual to have so much rain at this season. Both these — or this whole rise — are owing to heavy rains on the frozen ground carrying off what snow there was, and now soaking up. The hills shed it all like a roof into the valleys. It is up to the hubs on the causeways, and foot-travellers have to cross on the river and meadows. Melvin and others are out after muskrats again, and [I] see them with their pouches stuffed out with their round bodies.

Minott to-day enumerates the red, gray, black, and what he calls the Sampson fox. He says, "It's a sort of yaller fox, but their pelts ain't good for much." He never *saw* one, but the hunters have told him of them. He never saw a gray nor a black one. Told how Jake Lakin lost a dog, a very valuable one, by a fox leading him on to the ice on the Great Meadows and drowning him. Said the raccoon made a track very

much like a young child's foot. He had often seen it in the mud of a ditch.

Jan. 31. *Wednesday.* A clear, cold, beautiful day. Fine skating. An unprecedented expanse of ice.

At 10 A. M., skated up the river to explore further than I had been. The water within ten inches of the height at which it stood April 23d, '52, as I noticed at the stone bridge.[1]

At 8 A. M., the river rising, the thin yellowish ice of last night, next the shore, is, as usual, much heaved up in ridges, as if beginning to double on itself, and here and there at 9 o'clock, being cracked thus in the lowest parts, the water begins to spurt up in some places in a stream, as from an ordinary pump, and flow along these valleys; and thus we have soon reëstablished an edging of shallow yellowish or oil-colored water all along the river and meadows, covered with floating snow-fleas.

By noon, though it was a pretty cool day, the water had generally burst through and overflowed the ice along the shore and once more stood at a level there; *i. e.*, water and ice made a level where the ice was uneven before. Before skating up-stream I tried my boat-sail on the meadow in front of the house and found that I could go well enough before the wind, resting the mast on my hip and holding by the middle with one hand, but I could not easily tack.

The country thus almost completely bare of snow, — only some ice in the roads and fields, — and the frozen

[1] *Vide* Feb. 1st.

freshet at this remarkable height, I skated up as far as the boundary between Wayland and Sudbury just above Pelham's Pond, to a point which a woman called about one and a half miles from Saxonville, about twelve miles, between 10 A. M. and one, quite leisurely. There I found the river open unexpectedly, as if there were a rapid there, and as I walked up it some three quarters of a mile, it was still open before me a half-mile further at least, or probably to the falls.[1] Somewhat like this: —

All the open part, one and a half miles at least, was pretty closely hemmed in by highlands. I skated about twelve miles and walked three quarters of a mile further. It was, all the way that I skated, a chain of meadows, with the muskrat-houses still rising above the ice, commonly on the bank of the river, and marking it like smaller haycocks amid the large ones still left. I skated past three bridges above Sherman's — or nine in all (?) — and walked to the fourth. The next, or fifth, would probably be that in middle

[1] [Three interrogation-points inserted here, evidently at a later time.]

of Saxonville. *Viz.* Causeway bridges, Mill Village Bridge at Larned Brook, Pelham Pond Bridge, and that on road from Dudley Pond to Southboro and Marlboro.

As I skated near the shore under Lee's Cliff, I saw what I took to be some scrags or knotty stubs of a dead limb lying on the bank beneath a white oak, close by me. Yet while I looked directly at them I could not but admire their close resemblance to partridges. I had come along with a rapid whir and suddenly halted right against them, only two rods distant, and, as my eyes watered a little from skating against the wind, I was not convinced that they were birds till I had pulled out my glass and deliberately examined them. They sat and stood, three of them, perfectly still with their heads erect, some darker feathers like ears, methinks, increasing their resemblance to scrabs [*sic*], as where a small limb is broken off. I was much surprised at the remarkable stillness they preserved, instinctively relying on the resemblance to the ground for their protection, *i. e.* withered grass, dry oak leaves, dead scrags, and broken twigs. I thought at first that it was a dead oak limb with a few stub ends or scrabbs [*sic*] sticking up, and for some time after I had noted the resemblance to birds, standing only two rods off, I could not be sure of their character on account of their perfect motionlessness, and it was not till I brought my glass to bear on them and saw their eyes distinctly, steadily glaring on me, their necks and every muscle tense with anxiety, that I was convinced. At length, on some signal

which I did not perceive, they went with a whir, as if shot, off over the bushes.

It was quite an adventure getting over the bridge-ways or causeways, for on every shore there was either water or thin ice which would not bear. Sometimes I managed to get on to the timbers of a bridge, the end of a projecting "tie" (?), and off the same way, thus straddling over the bridges and the gulf of open water about them on to the edge of the thick ice, or else I swung myself on to the causeways by the willows, or crawled along a pole or rail, catching at a tree which stood in the water, — or got in. At the bend above the Pantry, there was [a] sort of canal or crack quite across the river and meadow, excepting a slight bridge of ice. As I passed the mouth of Larned Brook, off Wayland meeting-house, I pulled out my glass and saw that it was 12.30 o'clock. In each town I found one or two trappers come forth to shoot muskrats. As a regular thing they turned out after dinner, buttoning up their greatcoats. All along the river their cabins had been torn to pieces by them, and in one place I saw two men sitting over the hole where they had just demolished one, one with a pistol ready pointed to the water where he expected the rat to come up, the other with a gun. In this twelve miles of the river there would be two or three at least pretty sure to turn out such a day and take to the ice for musk-rats. I saw again an abundance of sweet-gale seed on the ice, frozen in, near Pelham's Pond. This seed is thus dispersed regularly on a large scale. It lies as it was washed along the edge of an overflow. Beside

a dilapidated muskrat's house, lay the wretched carcass of its former occupant on the ice, stripped of its hide, — black, even without its skin, with veins of red. Returning, I saw a large hawk flapping and sailing low over the meadow. There was some dark color to its wings.

You were often liable to be thrown when skating fast, by the shallow puddles on the ice formed in the middle of the day and not easy to be distinguished. These detained your feet while your unimpeded body fell forward.

VI

FEBRUARY, 1855

(ÆT. 37)

Feb. 1. As usual these broad fields of ice could not be left uncovered over the third day. It began to spit a little snow at noon, just enough to show on the ice, the thickness of a blanket, though not on the ground, — dissipated there both by the warmth and irregularity.

At 4 P. M., I find that the river rose last evening to within eight and a half inches of the rise of April 23d, 1852, and then began to fall. It has now fallen about four inches. Accordingly, the river falling all day, no water has burst out through the ice next the shore, and it is now one uninterrupted level white blanket of snow quite to the shore on every side. This, then, is established, — that, the river falling four inches during the day, though it has been as warm as yesterday, there has been no overflow along the shore. Apparently the thin recent ice of the night, which connects the main body with the shore, bends and breaks with the rising of the mass, especially in the morning, under the influence of the sun and wind, and the water establishes itself at a new level.

As I skated up the river so swiftly yesterday, now here now there, past the old kingdoms of my fancy, I was reminded of Landor's "Richard the First." "I

sailed along the realms of my family; on the right was England, on the left was France [on the right was Sudbury, on the left was Wayland;][1] little else could I discover than sterile eminences and extensive shoals. They fled behind me; so pass away generations; so shift, and sink, and die away affections." "I debark in Sicily." That was Tall's Island. "I sail again, and within a day or two [an hour or two?] I behold, as the sun is setting, the solitary majesty of Crete, mother of a religion, it is said, that lived 2000 years. [That was Nobscot surely.] Onward, and many specks bubble up along the blue Ægean [these must have been the muskrat-houses in the meadows], every one [I have no doubt] the monument of a greater man [being?] than I am."

The swelling river was belching on a high key, from ten to eleven. Quite a musical cracking, running like chain lightning of sound athwart my course, as if the river, squeezed, thus gave its morning's milk with music. A certain congealed milkiness in the sound, like the soft action of piano keys, — a little like the cry of a pigeon woodpecker, — *a-week a-week*, etc. A congealed gurgling, frog-like. As I passed, the ice forced up by the water on one side suddenly settled on another with a crash, and quite a lake was formed above the ice behind me, and my successor two hours after, to his wonder and alarm, saw my tracks disappear in one side of it and come out on the other. My seat from time to time is the springy horizontal bough of some fallen tree which is frozen into the ice, some old maple that had blown over and retained some

[1] [The brackets in this paragraph are Thoreau's.]

life for a year after in the water, covered with the great shaggy perforate parmelia. Lying flat, I quench my thirst where it is melted about it, blowing aside the snow-fleas. The great arundo in the Sudbury meadows was all level with the ice. There was a great bay of ice stretching up the Pantry and up Larned Brook. I looked up a broad, glaring bay of ice at the last place, which seemed to reach to the base of Nobscot and almost to the horizon. Some dead maple or oak saplings, laid side by side, made my bridges by which I got on to the ice along the watery shore. It was a problem to get off, and another to get on, dry-shod. You are commonly repaid for a longer excursion than usual, and being outdoors all day, by seeing some rarer bird for the season, as yesterday a great hawk.

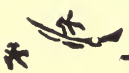
Feb. 2. Quite clear and colder, yet it could not refrain from snowing half an inch more in the night, whitening the ground now, *as well* as the ice.

Brown is again filling his ice-house, which he commenced to do some weeks ago.

I got another skate this afternoon, in spite of the thin coating of snow. This, then, is the fourth day of this rare skating, though since yesterday noon the slight whitening of snow has hurt it somewhat.

The river at 4 P. M. has fallen some eight or ten inches. In some places there are thin flakes of ice standing on their edges within an inch or two of each other over more than a quarter of an acre, either ice blown into that position (which in this case is not likely, since there is a great deal too much for that surface)

or crystallized so while the water suddenly ran off below. There are large tracts of thin white ice, where the water ran off before it had time to freeze hard enough to bear.

This last half-inch of snow, which fell in the night, is just enough to track animals on the ice by. All about the Hill and Rock I see the tracks of rabbits which have run back and forth close to the shore repeatedly since the night. In the case of the rabbit the fore feet are further apart than the hind ones, the first say four or five inches to the outside, the last two or three.[1] They are generally not quite regular, but one of the fore feet a little in advance of the other, and so with one of the hind feet. There is an interval of about sixteen inches between each four tracks. Sometimes they are in a curve or crescent, all touching. I saw what must have been either a muskrat's or mink's track, I think, since it came out of the water,—the tracks roundish and toes much rayed, four or five inches apart in the trail, with only a trifle more between the fore and hind legs,  and the mark of the tail in successive curves as it struck the ice, thus: Another track puzzled me, as if a hare had been running like a dog

and touched its tail, — if it had any. This in several places.

[1] [Thoreau afterward discovered his mistake and learned that the hind feet come down outside and in front of the fore feet.]

Snowed again half an inch more in the evening, after which, at ten o'clock, the moon still obscured, I skated on the river and meadows. The water falling, the ice on the meadow occasionally settles with a crack under our weight. It is pleasant to feel these swells and valleys occasioned by the subsidence of the water, in some cases pretty abrupt. Also to hear the hollow, rumbling sound in such rolling places on the meadow where there is an empty chamber beneath, the water being entirely run out. Our skates make but little sound in this coating of snow about an inch thick, as if we had on woollen skates, and we can easily see our tracks in the night. We seem thus to go faster than before by day, not only because we do not see (but feel and imagine) our rapidity, but because of the impression which the mysterious muffled sound of our feet makes. In the meanwhile we hear the distant note of a hooting owl, and the distant rumbling of approaching or retreating cars sounds like a constant waterfall. Now and then we skated into some chippy, crackling white ice, where a superficial puddle had run dry before freezing hard, and got a tumble.

Feb. 3. This morning it is snowing again, as if a squall. The snow has thus spit on the ice four times since this last skating began on Tuesday, the 30th, *viz.* Thursday noon, Thursday evening, Friday evening, and now Saturday morning. This will deserve to be called the winter of skating. The heavens thus spit on the ice as if they had a spite against it. I even

suspect that the account of the matter may be that when an atmosphere containing more moisture than usual is wafted over this chain of broad ice lakes (especially the rest of the country being bare of snow) its moisture is suddenly condensed and frozen, and there is a spitting of snow. This last flurry lasted an hour or more, and then it grew colder and windy.

P. M. — Skating through snow.

Skated up the river with T[appa]n in spite of the snow and wind. It had cleared up, but the snow was on a level strong three quarters of an inch deep (seemingly an inch), but for the most part blown into drifts three to ten feet wide and much deeper (with bare intervals) under a strong northwesterly wind. It was a novel experience, this skating through snow, sometimes a mile without a bare spot, this blustering day. In many places a crack ran across our course where the water had oozed out, and the driving snow catching in it had formed a thick batter with a stiffish crust in which we were tripped up and measured our lengths on the ice. The few thin places were concealed, and we avoided them by our knowledge of the localities, though we sometimes saw the air-bubbles of the mid-channel through the thin ice; for, the water going down, the current is increasing and eating its way through the ice. Sometimes a thicker drift, too, threw us, or a sudden unevenness in the concealed ice; but on the whole the snow was but a slight obstruction. We skated with much more facility than I had anticipated, and I would not have missed the experience for a good deal. The water, falling rapidly, has left

a part of the ice in shelves attached to the shore and to the alders and other trees and bushes, fifteen or eighteen inches above the general level, with a spongy or brittle mass of crystals suspended from its under sides five or six inches deep, or double that of the ice, looking like lace-work on the side and showing all kinds of angular geometrical figures when you look down on it turned bottom up; as if the water had sunk away faster than it could freeze solidly. I think that in my ice-flakes of the 2d the thin crust of the horizontal ice was blown off and had left these exposed. Sometimes we had to face a head wind and driving or blowing snow which concealed the prospect a few rods ahead, and we made a tedious progress.

We went up the Pantry Meadow above the old William Wheeler house, and came down this meadow again with the wind and snow dust, spreading our coat-tails, like birds, though somewhat at the risk of our necks if we had struck a foul place. I found that I could sail on a tack pretty well, trimming with my skirts. Sometimes we had to jump suddenly over some obstacle which the snow had concealed before, to save our necks. It was worth the while for one to look back against the sun and wind and see the other sixty rods off coming, floating down like a graceful demon in the midst of the broad meadow all covered and lit with the curling snow-steam, between which you saw the ice in dark, waving streaks, like a mighty river Orellana braided of a myriad steaming currents, — like the demon of the storm driving his flocks and herds before him. In the midst of this tide of curling

snow-steam, he sweeps and surges this way and that and comes on like the spirit of the whirlwind.

At Lee's Cliff we made a fire, kindling with white pine cones, after oak leaves and twigs, — else we had lost it; these saved us, for there is a resinous drop at the point of each scale, — and then we forgot that we were outdoors in a blustering winter day.

The drifts will probably harden by to-morrow and make such skating impossible. I was curious to see how my tracks looked, — what figure I cut, — and skated back a little to look at it. That little way it was like this somewhat: —

somewhat like the shallow snow-drifts.

Looking toward the sun and wind, you saw a broad river half a mile or more in width, its whole surface lit and alive with flowing streams of snow, in form like the steam which curls along a river's surface at sunrise, and in midst of this moving world sailed down the skater, majestically, as if on the surface of water while the steam curled as high as his knees.

Several broad bays open on to this, some of them, like the Pantry and Larned Brook, two or more miles deep.

You scarcely see a bird such a day as this.

Flash go your dry leaves like powder and leave a few bare and smoking twigs. Then you sedulously feed a little flame, until the fire takes hold of the solid wood and establishes itself. What an uncertain and

negative thing, when it finds nothing to suit its appetite after the first flash! What a positive and inexpugnable thing, when it begins to devour the solid wood with a relish, burning with its own wind! You must study as long at last how to put it out, as you did how to kindle it. Close up under some upright rock, where you scorch the yellow sulphur lichens. Then cast on some creeping juniper wreaths or hemlock boughs to hear them crackle, realizing Scripture.

Some little boys ten years old are as handsome skaters as I know. They sweep along with a graceful floating motion, leaning now to this side, then to that, like a marsh hawk beating the bush.

I still recur in my mind to that skate of the 31st. I was thus enabled to get a bird's-eye view of the river, — to survey its length and breadth within a few hours, connect one part (one shore) with another in my mind, and realize what was going on upon it from end to end, — to know the whole as I ordinarily knew a few miles of it only. I connected the chestnut-tree house, near the shore in Wayland, with the chimney house[1] in Billerica, Pelham's Pond with Nutting's Pond in Billerica. There is good skating from the mouth to Saxonville, measuring in a straight line some twenty-two miles, by the river say thirty now, Concord midway. It is all the way of one character, — a meadow river, or dead stream, — Musketicook, — the abode of muskrats, pickerel, etc., crossed within these dozen miles each way, — or thirty in all, — by some

[1] Atkinson's?

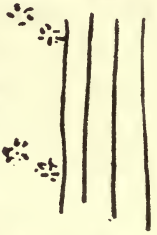
twenty low wooden bridges, *sublicii pontes*, connected with the mainland by willowy causeways. Thus the long, shallow lakes divided into reaches. These long causeways all under water and ice now, only the bridges peeping out from time to time like a dry eyelid. You must look close to find them in many cases. Mere islands are they to the traveller, in the waste of water and ice. Only two villages lying near the river, Concord and Wayland, and one at each end of this thirty miles.

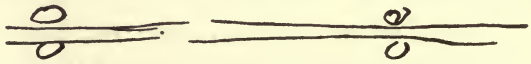
Haycocks commonly stand only in the Sudbury meadow. You must beware when you cross the deep, dark channel between the sunken willow rows, distinguishing it from the meadowy sea where the current is seen eating its way through; else you may be in overhead before you know it. I used some bits of wood with a groove in them for crossing the causeways and gravelly places, that I need not scratch my skate-irons.

Minott says that the white rabbit does not make a hole, — sits under a bunch of dry ferns and the like, — but that the gray one does. They and the fox love to come out and lie in the sun.

Feb. 4. Clear and cold and windy; much colder than for some time.

Saw this afternoon a very distinct otter-track by the Rock, at the junction of the two rivers. The separate foot-tracks were quite round, more than two inches in diameter, showing the five toes distinctly in the snow, which was about half an inch deep. In one place,

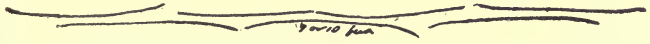
where it had crossed last night to Merrick's pasture, its trail, about six inches wide and of furrows in the snow, was on one side of its foot-tracks, thus:  and there was about nine inches between the fore and hind feet [*sic*]. Close by the Great Aspen I saw where it had entered or come out of the water under a shelf of ice left adhering to a maple. There it apparently played and slid on the level ice, making a broad trail as if a shovel had been shoved along, just eight inches wide, without a foot-track in it for four feet or more. And again the trail was only two inches wide and between the foot-tracks, which were



side by side and twenty-two inches apart. It had left much dung on the ice, soft, yellow, bowel-like, like a gum that has been chewed in consistency. About the edge of the hole, where the snow was all rubbed off, was something white which looked and smelt exactly like bits of the skin of pouts or eels. Minott tells of one shot once while eating an eel. Vance saw one this winter in this town by a brook eating a fish.

The water has now fallen nearly two feet, and those ice shelves I noticed yesterday, when you go into a swamp and all along the shore amid the alders, birches, and maples, look just like ample picnic tables ready set, two feet high, with often a leaf down or else a table-cloth hanging, — just like camp tables around the tent-poles, now covered with snowy napkins.

I notice my old skate-tracks like this: —



It is better skating to-day than yesterday. This is the sixth day of some kind of skating.

Feb. 5. It was quite cold last evening, and I saw the scuttle window reflecting the lamp from a myriad brilliant points when I went up to bed. It sparkled as if we lived inside of a cave, but this morning it has moderated considerably and is snowing. Already one inch of snow has fallen.

According to Webster, in Welsh a hare is "furze or gorse-cat." Also, "Chuk, a word used in calling swine. It is the original name of that animal, which our ancestors brought with them from Persia, where it is still in use. Pers. *chuk*," etc. "Sans. *sugara*. Our ancestors while in England adopted the Welsh *hwc*, hog; but *chuck* is retained in our popular name of woodchuck, that is, wood hog."

In a journal it is important in a few words to describe the weather, or character of the day, as it affects our feelings. That which was so important at the time cannot be unimportant to remember.

Day before yesterday the fine snow, blowing over the meadow in parallel streams between which the darker ice was seen, looked just like the steam curling along the surface of a river. In the midst of this, midleg deep at least, you surged along. It was surprising how, in the midst of all this stationary and drifting snow, the skate found a smooth and level

surface over which it glided so securely, with a muffled rumble. The ice for the last week has reached quite up into the village, so that you could get on to it just in the rear of the bank and set sail on skates for any part of the Concord River valley.

Found Therien cutting down the two largest chestnuts in the wood-lot behind where my house was. On the butt of one about two feet in diameter I counted seventy-five rings. T. soon after broke his axe in cutting through a knot in this tree, which he was cutting up for posts. He broke out a piece half an inch deep. This he says often happens. Perhaps there is some frost in his axe. Several choppers have broken their axes to-day.

Feb. 6. The coldest morning this winter. Our thermometer stands at $-14°$ at 9 A. M.; others, we hear, at 6 A. M. stood at $-18°$, at Gorham, N. H., $-30°$. There are no loiterers in the street, and the wheels of wood wagons squeak as they have not for a long time, — actually shriek. Frostwork keeps its place on the window within three feet of the stove *all day* in my chamber. At 4 P. M. the thermometer is at $-10°$; at six it is at $-14°$.

I was walking at five, and found it stinging cold. It stung the face. When I look out at the chimneys, I see that the cold and hungry air snaps up the smoke at once. The smoke is clear and light-colored and does not get far into the air before it is dissipated (?), condensed. The setting sun no sooner leaves our west windows than a solid but beautiful crystallization coats

them, except perhaps a triangularish bare spot at one corner, which perhaps the sun has warmed and dried. (I believe the saying is that by the 1st of February the meal and grain for a horse are half out.) A solid sparkling field in the midst of each pane, with broad, flowing sheaves surrounding it. It has been a very mild as well as open winter up to this. At 9 o'clock P. M., thermometer at $-16°$. They say it did not rise above $-6°$ to-day.

Feb. 7. The coldest night for a long, long time was last. Sheets froze stiff about the faces. Cat mewed to have the door opened, but was at first disinclined to go out. When she came in at nine she smelt of meadow-hay. We all took her up and smelled of her, it was so fragrant. Had cuddled in some barn. People dreaded to go to bed. The ground cracked in the night as if a powder-mill had blown up, and the timbers of the house also. My pail of water was frozen in the morning so that I could not break it. Must leave many buttons unbuttoned, owing to numb fingers. Iron was like fire in the hands. Thermometer at about 7.30 A. M. gone into the bulb, $-19°$ at least. The cold has stopped the clock. Every bearded man in the street is a graybeard. Bread, meat, milk, cheese, etc., etc., all frozen. See the inside of your cellar door all covered and sparkling with frost like Golconda. Pity the poor who have not a large wood-pile. The latches are white with frost, and every nail-head in entries, etc., has a white cap. The chopper hesitates to go to the woods. Yet I see S. W—— stumping past, three quarters of

a mile, for his morning's dram. Neighbor Smith's thermometer stood at −26° early this morning. But this day is at length more moderate than yesterday.

R. Rice says that alewives used to go into Pelham Pond, — that you may go up Larned Brook and so into the pond by a ditch. His brother James skated from Sudbury to Billerica and by canal to Charlestown and back. He used to see where the otter had slid at Ware (Weir?) Hill, a rod down the steep bank, as if a thousand times, it was so smooth. After a thick snow had been falling in the river and formed a slosh on the surface, he could tell whether otter had been at work, by the holes in this slosh or snowy water where they had put up their heads while fishing. The surface would be all dotted with them. He had known musquash to make a canal to keep the water from freezing, a foot wide. Thinks otter make their track by drawing themselves along by the fore feet, obliterating the track of their feet. But may not the tail suffice to do this in light snow? Had seen a fox catching mice in a meadow. He would jump up and come down on a tussock, and then look round over the edge to see if he had scared any mice out of it. Two frog hawks (white rump and slaty wings, rather small hawk) have their nest regularly at his place in Sudbury. He once saw one — the male, he thinks — come along from the meadow with a frog in his claws. As he flew up toward and over the wood where the other was setting, he uttered a peculiar cry and, the other darting out, he let the frog drop two or three rods through the air, which the other caught.

He spoke of the Dunge Hole, meaning that deep hollow and swamp by the road from the Wheelers' to White Pond. This probably the same that is referred to in the Town Records. Showed me a bunching up of the twigs of a larch from his swamp, perfectly thick, two feet in diameter, forty feet up a tree. This principle extends apparently to all the evergreens. You could not begin to see through this, though all the leaves of course are off.

Though the cold has been moderate to-day compared with yesterday, it has got more into the houses and barns, and the farmers complain more of it while attending to their cattle. This, *i. e.* yesterday, the 6th, will be remembered as the cold Tuesday. The old folks still refer to the Cold Friday, when they sat before great fires of wood four feet long, with a fence of blankets behind them, and water froze on the mantelpiece. But they say this is as cold as that was.

Feb. 8. Commenced snowing last evening about 7 o'clock, — a fine, dry snow, — and this morning it is about six inches deep and still snows a little. Continues to snow finely all day.

Feb. 9. Snowed harder in the night and blowed considerably. It is somewhat drifted this morning. A very fine and dry snow, about a foot deep on a level. It stands on the top of our pump about ten inches deep, almost a perfect hemisphere, or half of an ellipse.

It snows finely all day, making about twice as much as we have had on the ground before this winter.

Tree sparrows, two or three only at once, come into the yard, the first I have distinguished this winter. I notice that the snow-drifts on the windows, as you see the light through them, are stratified, showing undulating, equidistant strata, apparently as more or less dense (maybe more or less coarse and damp), — alternately darker and lighter strata. I was so sure this storm would bring snowbirds into the yard that I went to the window at ten to look for them, and there they were. Also a downy woodpecker — perhaps a hairy — flitted high across the street to an elm in front of the house and commenced assiduously tapping, his head going like a hammer. The snow is so light and dry that it rises like spray or foam before the legs of the horses. They dash it before them upward like water. It is a handsome sight, a span of horses at a little distance dashing through it, especially coming toward you. It falls like suds around their legs. Why do birds come into the yards in storms almost alone? Are they driven out of the fields and woods for their subsistence? Or is it that all places are wild to them in the storm? It is very dark in cellars, the windows being covered with snow.

P. M. — Up river to Hubbard's Swamp and Wood.

The river and meadow are concealed under a foot of snow. I cannot tell when I am on it. It would be dangerous for a stranger to travel across the country now. The snow is so dry that, though I go through drifts up to my middle, it falls off at once and does not adhere to and damp my clothes at all. All over this swamp I find that the ice, upheld by the trees and

shrubs, stands some two feet above the ground, the water having entirely run out beneath, and as I go along the path, not seeing any ice in snow a foot deep, it suddenly sinks with a crash for a rod around me, snow and all, and, stooping, I look through a dry cellar from one to two feet deep, in some places pretty dark, extending over the greater part of the swamp, with a perfectly level ceiling composed of ice one to two inches thick, surmounted by a foot of snow, and from the under side of the ice there depends from four to six inches a dense mass of crystals, so that it is a most sparkling grotto. You could have crawled round under the ice and snow all over the swamp quite dry, and I saw where the rabbits, etc., had entered there. In another swamp, where the trees were larger and further apart, only about one half the ice was held up in this manner, in tables from a few feet to a rod in diameter, so that it was very difficult walking. In the first place, as I was walking along the path, the first I knew down went the whole body of the snow for a rod, and I saw into a dark cavern yawning about me. I should think this ice by its strain and fall would injure the young trees and bushes; many are barked by it. And so it melts and wastes away, tumbling down from time to time with a crash. Those crystals were very handsome, and tinkled when touched like bits of tin. I saw a similar phenomenon February 4th, on a smaller scale. The snow is so dry that but little lodges on the trees.

I saw very few tracks to-day. It must be very hard for our small wild animals to get along while the snow is

so light. Not only the legs but the whole body of some — a skunk, for example, I think — sinks in it and leaves its trail. They must drag themselves bodily through it.

Saw *F. linarias.*

Elsewhere we hear the snow has been much deeper than here.

Feb. 10. P. M. — To Walden.

A fine, clear day. There is a glare of light from the fresh, unstained surface of the snow, so that it pains the eyes to travel toward the sun.

I go across Walden. My shadow is very blue. It is especially blue when there is a bright sunlight on pure white snow. It suggests that there may be something divine, something celestial, in me.

Silas Hosmer tells me that a wild deer was killed in Northboro this winter.

In many places the edges of drifts are sharp and curving, almost a complete circle, reflecting a blue color from within like blue-tinted shells.

I hear the faint metallic chirp of a tree sparrow in the yard from time to time, or perchance the mew of a linaria. It is worth the while to let some pigweed grow in your garden, if only to attract these winter visitors. It would be a pity to have these weeds burned in the fall. Of the former I see in the winter but three or four commonly at a time; of the latter, large flocks. This in and after considerable snow-storms.

Since this deeper snow, the landscape is in some respects more wintry than before; the rivers and roads are more concealed than they have been, and billows

of snow succeed each other across the fields and roads, like an ocean waste.

Feb. 11. P. M. — To J. Dugan's *via* Tommy Wheeler's.

The atmosphere is very blue, tingeing the distant pine woods. The dog scared up some partridges out of the soft snow under the apple trees in the Tommy Wheeler orchard.

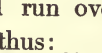
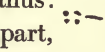
Smith's thermometer early this morning at $-22°$; ours at 8 A. M. $-10°$.

Feb. 12. All trees covered this morning with a hoar frost, very handsome looking toward the sun, — the ghosts of trees. Is not this what was so blue in the atmosphere yesterday afternoon?

P. M. — To Walden.

A very pleasant and warm afternoon. There is a softening of the air and snow. The eaves run fast on the south side of houses, and, as usual in this state of the air, the cawing of crows at a distance and the crowing of cocks fall on the air with a peculiar softness and sweetness; they come distinct and echoing musically through the pure air. What are those crows about, which I see from the railroad causeway in the middle of a field where no grass appears to rise above the snow, — apparently feeding? I observe no mouse-tracks in the fields and meadows. The snow is so light and deep that they have run wholly underneath, and I see in the fields here and there a little hole in the crust where they have come to the surface. In Trillium

Woods I see, as usual, where a squirrel has scratched along from tree to tree. His tracks cease at the foot of a pine, up which he has ascended within these few hours. He may be concealed now amid the thickest foliage. It is very pleasant to stand now in a high pine wood where the sun shines in amid the pines and hemlocks and maples as in a warm apartment. I see at Warren's Crossing where, last night perhaps, some partridges rested in this light, dry, deep snow. They must have been almost completely buried. They have left their traces at the bottom. They are such holes as would be made by crowding their bodies in backwards, slanting-wise, while perhaps their heads were left out. The dog scared them out of similar holes yesterday in the open orchard. I watched for a long time two chickadee-like birds, — only, I thought, a good deal larger, — which kept ascending the pitch pines spirally from the bottom like the nuthatch. They had the markings and the common faint note of the chickadee, yet they looked so large and confined themselves so to the trunk that I cannot but feel still some doubt about them. They had black chins, as well as top of head; tail, black above; back, slate; sides, dirty-white or creamy; breast, etc., white.

Set a trap in the woods for wild mice. I saw where they had run over the snow, making a slight impression, thus:  the tracks some five inches apart,  frequently with a very distinct mark of the tail. These tracks commonly came together soon and made one beaten trail where two or three had passed, or one several times; as if

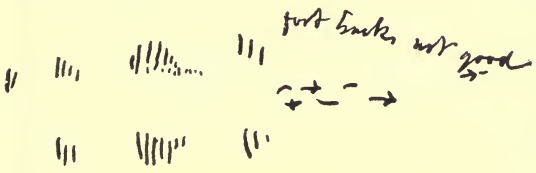
they had hopped along, two, three, or four in company. The whole trail would be five or six inches wide.

Under the birches, where the snow is covered with birch seeds and scales, I see the fine tracks, undoubtedly of linarias. The track of one of these birds in the light surface looks like a chain, or the ova of toads. Where a large flock has been feeding, the whole surface is scored over by them.

Feb. 13. 10 A. M. — To Walden Woods.

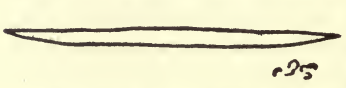
Not cold; sky somewhat overcast.

The tracks of partridges are more remarkable in this snow than usual, it is so light, being at the same time a foot deep. I see where one has waddled along several rods, making a chain-like track about three inches wide (or two and a half), and at the end has squatted in the snow, making a perfectly smooth and regular oval impression, like the bowl of a spoon, five inches wide. Then, six inches beyond this, are the marks of its wings where it struck the snow on each side when it took flight. It must have risen at once without running. In one place I see where one, after running a little way, has left four impressions of its wings on the snow on each side extending eighteen or twenty inches and twelve or fifteen in width:



In one case almost the entire wing was distinctly

impressed, eight primaries and five or six secondaries. In one place, when alighting, the primary quills, five of them, have marked the snow for a foot. I see where many have dived into the snow, apparently last night, on the side of a shrub oak hollow. In four places they have passed quite underneath it for more than a foot; in one place, eighteen inches. They appear to have dived or burrowed into it, then passed along a foot or more underneath and squatted there, perhaps, with their heads out, and have invariably left much dung at the end of this hole. I scared one from its hole only half a rod in front of me now at 11 A. M. These holes seen sidewise look thus:—



It is evidently a hardy bird, and in the above respects, too, is like the rabbit, which squats under a brake or bush on the snow. I see the traces of the latter in hollows in the snow in such places, — their forms.

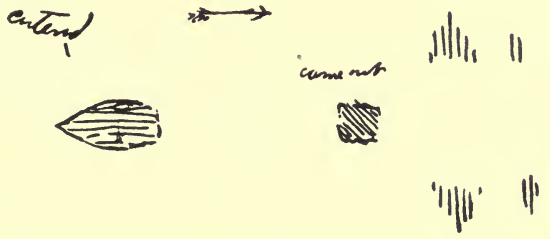
In the Journal of the Rev. William Adams (afterward settled in Dedham), written apparently in and about Cambridge, Mass. (he graduated in 1671 at Cambridge), he says under "Dece 1" (1670), "This day was the first flight of snow this winter it being hardly over shoes." And 1671, November "24. The first great snow this winter being almost knee deep." (Hist. Coll., 4th Series, vol. i.)

An English antiquarian says, "May-Flower was a very favorite name with English seamen, and given by them to vessels from almost every port in England." (*Ibid.* p. 85.)

"Hurts" is an old English word used in heraldry, where, according to Bailey, it is "certain balls resembling hurtle berries."

One of these pigweeds in the yard lasts the snow-birds all winter, and after every new storm they revisit it. How inexhaustible their granary!

To resume the subject of partridges, looking further in an open place or glade amid the shrub oaks and low pitch pines, I found as many as twenty or thirty places where partridges had lodged in the snow, apparently the last night or the night before. You could see commonly where their bodies had first struck the snow and furrowed it for a foot or two, and six inches wide, then entered and gone underneath two feet and rested at the further end, where the manure is left. Is it not likely that they remain quite under the snow there, and do not put their heads out till ready to start? In many places they walked along before they went under the snow. They do not go under deep, and the gallery they make is mostly filled up behind them, leaving only a thin crust above. Then invariably, just beyond this resting-place, you could see the marks made by their wings when they took their departure:



These distinct impressions made by their wings, in the pure snow, so common on all hands, though the bird that made it is gone and there is no trace beyond, affect me like some mystic Oriental symbol, — the winged globe or what-not, — as if made by a spirit. In some places you would see a furrow and hollow in the snow where there was no track for rods around, as if a large snowball or a cannon-ball had struck it, where apparently the birds had not paused in their flight. It is evidently a regular thing with them thus to lodge in the snow. Their tracks, when perfectly distinct, are seen to be almost in one straight line thus, trailing the middle toe:

about five inches apart. In one place I saw where one had evidently trailed the tips of the wings, making two distinct lines five or six inches apart, one on each side the foot-tracks; probably made by a male.

In the same place were many great tracks of the white rabbit. The earliest, made while the snow was very soft, were very large and shapeless, somewhat like the marks made by snow falling from the trees. More recent ones had settled and broken the slight crust around them, leaving a large indentation. The distinct track was like this:

the front tracks, which are the largest, being about two and a half inches in diameter, and the whole track of the four feet often one foot long.[1] These impressions so slight (though distinct) it is hard to realize that so heavy an animal made them.

[1] [See footnote, p. 163.]

I see where the squirrels have been eating the pitch pine cones since the last snow.

Feb. 14. Another rather warm morning, still more overcast than yesterday's. There is also another leaf or feather frost on the trees, weeds, and rails, — slight leaves or feathers, a quarter to a half inch long by an eighth wide, standing out around the slightest core. I think it is owing to the warmer nights. At nine last evening and at nine this morning, the thermometer stood at 20°. These ghosts of trees are very handsome and fairy-like, but would be handsomer still with the sun on them, — the thickened, clubbed tansy and the goldenrods, etc., and the golden willows of the railroad causeway, with spiring tops shaped like one of the frost leaves, and the white telegraph-wire, and the hoary sides of pine woods.

That cold weather of the 6th and 7th was preceded by two days (the 4th and 5th) much colder weather than we had been having. It moderated sufficiently to snow again on the evening of the 7th and the 8th and 9th. On the morning of the 11th was down to −22°.

Aunt Louisa says that her cousin Nahum Jones, son to that Nathan whom her mother and sisters visited with her down east, carried a cat to the West Indies, sold his vessel there; and though the same vessel did not return, and he came back in another vessel without the cat, the cat got home to Gouldsboro somehow, unaccountably, about the same time that he did. Captain Woodard told her that he carried the same cat three times round the world.

I said to Therien, "You did n't live at Smith's last summer. Where did you live? At Baker's?" "Yes," said he. "Well, is that a good place?" "Oh, yes." "Is that a better place than Smith's?" "Oh, a change of pasture makes a fatter calf."

Feb. 15. Commenced a fine half snow half rain yesterday afternoon. All rain and harder in the night, and now quite a thaw, still raining finely, with great dark puddles amid the snow, and the cars detained by wet rails. Does not a thaw succeed that blue atmosphere observed on the 11th? — a thaw, as well as warmer nights and hoar frosts?

All day a steady, warm, imprisoning rain carrying off the snow, not unmusical on my roof. It is a rare time for the student and reader who cannot go abroad in the afternoon, provided he can keep awake, for we are wont to be drowsy as cats in such weather. Without, it is not walking but wading. It is so long since I have heard it that the steady, soaking, rushing sound of the rain on the shingles is musical. The fire needs no replenishing, and we save our fuel. It seems like a distant forerunner of spring. It is because I am allied to the elements that the sound of the rain is thus soothing to me. The sound soaks into my spirit, as the water into the earth, reminding me of the season when snow and ice will be no more, when the earth will be thawed and drink up the rain as fast as it falls.

Feb. 16. Still rains a little this morning. Water

at the Mill-Dam higher than ever since the new block was built — or longer. Ground half bare, but frozen and icy yet.

P. M. — To Cliff *via* Spanish Brook.

A thick fog without rain. Sounds sweet and musical through this air, as crows, cocks, and striking on the rails at a distance. In the woods by the Cut, in this soft air, under the pines draped with mist, my voice and whistling are peculiarly distinct and echoed back to me, as if the fog were a ceiling which made this hollow an apartment. Sounds are not dissipated and lost in the immensity of the heavens above you, but your voice, being confined by the fog, is distinct, and you hear yourself speak. It is a good lichen day. Every crust is colored and swollen with fruit, and C. is constantly using his knife and filling his pockets with specimens. I have caught a mouse at last, where were tracks like those of February 12th, but it is eaten half up, apparently by its fellow (?). All the flesh is eaten out and part of the skin; one fore foot eaten off, but the entrails left. No wonder we do not find their dead bodies in the woods. The rest of the trap is not moved or sprung, and there is no track of a large animal or bird in the snow. It *may* have been a weasel. The sand is flowing fast in forms of vegetation in the Deep Cut. The fog is so thick we cannot see the engine till it is almost upon us, and then its own steam, hugging the earth, greatly increases the mist. As usual, it is still more dense over the ice at the pond.

The ground is more than half bare, especially in

open fields and level evergreen woods.[1] It is pleasant to see there the bright evergreens of the forest floor, undimmed by the snow, — the wintergreen, the great-leaved pyrola, the shin-leaf, the rattlesnake-plantain, and the lycopodiums. I see where probably rabbits have nibbled off the leaves of the wintergreen. It is pleasant to see elsewhere, in fields and on banks, so many green radical leaves only half killed by the winter. Are those little scratches across pallescent lichens which C. notices made by squirrels?

I find in the leavings of the partridges numerous ends of twigs. They are white with them, some half an inch long and stout in proportion. Perhaps they are apple twigs. The bark (and bud, if there was any) has been entirely digested, leaving the bare, white, hard wood of the twig. Some of the ends of apple twigs looked as if they had been bitten off. It is surprising what a quantity of this wood they swallow with their buds. What a hardy bird, born amid the dry leaves, of the same color with them, that, grown up, lodges in the snow and lives on buds and twigs! Where apple buds are just freshly bitten off they do not seem to have taken so much twig with them.

The drooping oak leaves show more red amid the pines this wet day, — agreeably so, — and I feel as if I stood a little nearer to the heart of nature.

The mouse is so much torn that I cannot get the length of the *body* and *its* markings exactly. Entire

[1] Goes on melting till there is only a little icy snow left on north of hills in woods on the 10th of March, and then is whitened again.

length, 8 inches;[1] length of head to *base* of ears, 1 inch; body, 3 (?); tail, $3\frac{1}{2}$. Brown or reddish-brown above; white beneath; *fur* slate above and beneath; tail also darker above, light beneath; feet white; hind legs longest, *say* $1\frac{1}{4}$ inches long; fore $\frac{3}{4}$; hind foot more than $\frac{3}{4}$ inch long; five toes on hind feet, four on front, with rudiment of thumb without claw, with little white protuberances on the soles of all; ears *large*, almost bare, thin, slaty-colored, $\frac{5}{8}$ inch long on outside; upper jaw $\frac{1}{4}+$ inch longer than lower; tail round, hairy, gradually tapering, dimly ringed; longest mustachios $1\frac{3}{8}$ inches; incisors varnish or dry maple-wood color.[2] From Emmons's account I should think it the *Arvicola Emmonsii* of De Kay, or deer mouse, which is thought a connecting link between the *Arvicola* and *Gerbillus*. The *Gerbillus* is the only other described much like it, and that is a "yellowish cream color" beneath.

Where snow is left on banks I see the galleries of mice (?) or moles (?) unroofed. The mouse I caught had come up through the snow by the side of a shrub oak, run along a rod, and entered again, *i. e.* before I set the trap.

Feb. 17. It is still cloudy and a very fine rain. The river *very* high, one inch higher than the evening of January 31st. The bridge at Sam Barrett's caved in; also the *Swamp* Bridge on back road. Muskrats driven out. Heard this morning, at the new stone bridge, from the hill, that singular springlike note of a bird

[1] Probably an inch too much. [2] *Vide* Feb. 20.

which I heard once before one year about this time (under Fair Haven Hill). The jays were uttering their unusual notes, and this made me think of a woodpecker. It reminds me of the pine warbler, *vetter vetter vetter vetter vet*, except that it is much louder, and I should say had the sound of *l* rather than *t*, — *veller*, etc., perhaps. Can it be a jay? or a pig[eon] woodpecker? Is it not the earliest springward note of a bird? In the damp misty air.

Was waked up last night by the tolling of a bell about 11 o'clock, as if a child had hold of the rope. Dressed and went abroad in the wet to see if it was a fire. It seems the town clock was out of order, and the striking part ran down and struck steadily for fifteen minutes. If it had not been so near the end of the week, it might have struck a good part of the night.

P. M. — A riparial excursion over further railroad bridge; return by Flint's Bridge.

At 2 P. M. the water at the Sam Wheeler Bridge is three inches above straight truss, or two inches higher than at 9 A. M. The ice is not broken over the channel of *this* stream, but is lifted up and also for a good distance over the meadows, but, for a broad space over the meadows on each *side*, the freshet stands over the ice, which is flat on the bottom. It rains but a trifle this afternoon, but the snow which is left is still melting. The water is just *beginning* to be over the road beyond this stone bridge. The road beyond the opposite, or Wood's, bridge is already impassable to foot-travellers.

I see no muskrats in the Assabet from the Tommy

Wheeler bank. Perhaps they provided themselves holes at the last freshet. It is running over both sides of Derby's Bridge for a dozen rods (each side), as over a dam. The ice in the middle of this stream is for the most part broken up. Great cakes of ice are wedged against the railroad bridge there, and still threaten its existence. They are about twenty feet in diameter and some twenty inches thick, of greenish ice, more or less tilted up and commonly another, if not two more, of equal size, forced directly underneath the first by the current. They stretch quite across the river, and, being partly tilted up against the spiles of the bridge, exert a tremendous power upon it. They form a dam between and over which the water falls, so that it is fully ten inches higher on the upper side of the bridge than on the lower. Two maples a little above the bridge — one a large one — have been levelled and carried off by the ice. The track-repairers have been at work here all day, protecting the bridge. They have a man on the ice with a rope round his body, — the other end in their hands, — who is cracking off the corners of the cakes with a crowbar. One great cake, as much as a dozen rods long, is slowly whirling round just above the bridge, and from time to time an end is borne against the ice which lies against the bridge. The workmen say that they had cleared the stream here before dinner, and all this had collected since. (Now 3 P. M.) If Derby's Bridge should yield to the ice which lies against it, this would surely be swept off. They say that three (?) years ago the whole of the east end of the bridge was moved some six inches,

rails and all. Waded through water in the road for eight or ten rods, beyond Loring's little bridge. It was a foot deep this morning on the short road that leads to Heywood's house. I had to go a quarter of a mile up the meadow there and down the college road. Sam Barrett's bridge is entirely covered and has slumped. They cross a broad bay in a boat there. I went over on the string-piece of the dam above. It is within eight or nine inches of the top of the little bridge this side of Flint's Bridge at 5.30 P. M. So, though it is within five and a half inches of where it was three years ago in the spring at the new stone bridge, it is not so high comparatively *here*. The fact is, the water is in each case dammed not only by the bridges and causeways but by the ice, so that it stands at as many levels as there are causeways. It is perhaps about a foot lower at Flint's Bridge now, than when it stood where it does now at the new stone bridge three years ago. So that a metre at one point alone will not enable you to compare the absolute height or quantity of water at different seasons and under different circumstances. Such a metre is the more to be relied on in proportion as a river is free from obstructions, such as ice, causeways, bridges, etc.

Everywhere now in the fields you see a green water standing over ice in the hollows. Sometimes it is a very delicate tint of green. Would this water look green on any white ground? It is commonly yellow on meadows in spring. The highway surveyor is on the alert to see what damage the freshet has done. As they could not dig in the frozen ground, they have

upset a cartload of pitch pine boughs into the hole at the Swamp Bridge.

Feb. 18. 8 A. M. — Water four and three quarters inches above truss, nearly two inches higher than yesterday at 2 P. M. It may have risen one inch higher during the day, then went down. Surface of ground and snow slightly frozen; no flowing now. At 9 A. M. sun comes out; rather warm; sunlight peculiarly yellow and spring-suggesting. Mountains in horizon dark-blue, the wooded parts, with snow below and between.

P. M. — To Great Meadows and around Beck Stow's.

A clear bright day, though with passing clouds, — the clouds darker by contrast with the bright sky, — the first since the evening of the 14th. Now for the first time decidedly there is something spring-suggesting in the air and light. Though not *particularly* warm, the light of the sun (now travelling so much higher) on the russet fields, — the ground being nearly all bare, — and on the sand and the pines, is suddenly *yellower*. It is the earliest day-breaking of the year. We now begin to look decidedly forward and put the winter behind us. We begin to form definite plans for the approaching spring and summer. I look over a parti-colored landscape of russet fields and white snow-patches, as in former spring days. Some of the frost has come out, and it is very wet and muddy crossing the plowed fields, — as filthy walking as any in

the year. You have the experience of wading birds that get their living on the flats when the tide has gone down and leave their tracks there, but you are cheered by the sight of some radical greenness. The legions of light have poured into the plain in overwhelming numbers, and the winter darkness will not recover the ground it has lost. I listen ever for something springlike in the notes of birds, some peculiar tinkling notes.

Now and through the winter I am attracted by the reddish patches on the landscape where there is a dense growth of young white birches, the bark of the young shoots.

Neither the main stream nor meadows are decidedly broken up by the thaw and rise; only there are great open places in the meadows, where you observe the ripple of water still in the mornings, the cold is so much relaxed, and the ice that belonged is superimposed in great cakes upon the still firmly frozen parts. On the Great Fields I see an acre of a straw-colored feathery grass in tufts two feet high. These too reflect the yellower light.

I see pitch pine cones two years old still closed on felled trees, two to six together recurved, in the last case closely crowded and surrounding the twig in a ring, forming very rich-looking clusters eight to ten inches from the extremity, and, within two or three inches of the extremity, maybe one or two small ones of the last year. Low down on twigs around the trunks of old trees, and sometimes on the trunk itself, you see old gray cones which have only opened or blos-

somed at the apex, covered with lichens; which have lost their spines.

A man came to our house at noon and got something to eat, who set out this morning to go from Waltham to Noah Wheeler's in Nine Acre Corner. He got as far as Lee's Bridge on the edge of Lincoln, or within three quarters of a mile of Wheeler's, and could not get over the river on account of the freshet; so he came round through Concord village, — he might have come by the railroad a little nearer, — and I directed him over the railroad bridge, the first by which he could cross dry-shod down the stream, and up-stream he would have been obliged to go to Saxonville. Thus he had to go eight miles round instead of three quarters of a mile direct, and in the whole about double the usual distance from Waltham. It was probably over the road also at Nut Meadow Brook. The river thus opposes a serious obstacle to travellers from southeast to northwest for some twenty miles of its course at least, above and below Concord. No doubt hundreds have been put to great inconvenience by it within a day or two. Even travellers in wagons are stopped at many of these causeways. If they were raised two feet the trouble would be in great part, the danger wholly, obviated. There should at least be provided a ferry for foot-passengers at each causeway, at the expense of the town, and the traveller could blow a horn to call the ferryman over. You will see a man carrying a child over a causeway on his back.

After a thaw old tracks in the snow, from *basso*,

become *alto relievo*.[1] The snow which was originally compressed and hardened beneath the feet, — also, perhaps, by the influence of the sun and maybe rain, — being the last to melt, becomes protuberant, the highest part and most lasting. That part of the snow compressed and solidified under the feet remains nearly at the same level. The track becomes a raised almost icy type. How enduring these trails! How nature clings to these types. The track even of small animals like a skunk will outlast a considerable thaw.

Why do laborers so commonly turn out their feet more than the class still called gentlemen, apparently pushing themselves along by the sides of their feet? I think you can tell the track of a clown from that of a gentleman, though he should wear a gentleman's boots.

Feb. 19. Rufus Hosmer says that in the year 1820 (?) there was so smooth and strong an icy crust on a very deep snow that you could skate everywhere over the fields and for the most part over the fences. Sam Potter's father, moving into town, turned off into the fields with a four(?)-horse team as soon as he had crossed Wood's Bridge and went directly across to Deacon Hubbard's. When Wood's Bridge was carried off upstream, it was landed against Hubbard's land. Showed me where his grandfather, Nathan Hosmer, who lived in the old house still standing on Conantum, was drowned

[1] [The antithesis intended was *intaglio* and *rilievo*, of course, not low and high relief.]

when crossing the river on the ice from town, just below the bridge since built.

Many will complain of my lectures that they are transcendental. "Can't understand them." "Would you have us return to the savage state?" etc., etc. A criticism true enough, it may be, from their point of view. But the fact is, the earnest lecturer can speak only to his like, and the adapting of himself to his audience is a mere compliment which he pays them. If you wish to know how I think, you must endeavor to put yourself in my place. If you wish me to speak as if I were you, that is another affair.

I think it was about a week ago that I saw some dead honey-bees on the snow.

The water is about a foot deep on the Jimmy Miles road. E. Conant thinks that the Joe Miles causeway is rather worse than Hubbard's in respect to water. Rice and some others always say "cassey" for causeway. Conant was cutting up an old pear tree which had blown down by his old house on Conantum. This and others still standing, and a mulberry tree whose stump remains, were set anciently with reference to a house which stood in the little peach orchard near by. The only way for Conant to come to town when the water is highest is by Tarbell's and Wood's on the stone bridge, about a mile and a half round.

It is true when there is no snow we cannot so easily see the birds, nor they the weeds.

Feb. 20. I have caught another of those mice of February 16th and secured it entire, — a male.

Whole length	6½ inches
Head, from the nose to the ears	1 inch
Tail	3⅛ inches
Longest of the whiskers	1⅝ "

Hind legs the longest, though only the feet, about three quarters of an inch in length, are exposed, without the fur. Of the fore legs a little more is exposed than the hands, or perhaps four to five eighths of an inch, claws concealed in tufts of white hair. The upper jaw projects about half an inch beyond the lower. The whole upper parts are brown, except the ears, from the snout to the tip of the tail, — dark-brown on the top of the head and back and upper side of the tail, reddish-brown or fawn or fox (?) colored on the sides. Tail hairy and obscurely ringed. The whole lower parts white, including the neat white feet and under side of tail. The irregular waving line along the sides, forming the boundary between the brown and the white, very sharply defined from side of the snout to the tip of the tail. Above brown, beneath white very decidedly. The brown of the sides extends down by a triangular point to the last joint or foot of the fore legs and to the same or heels of the hind ones, or you may say the white of the belly extends upward on the sides between the legs in a broad bay. The ears are large, broad and roundish, five eighths of an inch long, ash or slate-colored, thin and bare except at base. The reddish brown and the white are the striking colors. It is in the attitude of hopping, its thighs drawn up and concealed in the fur and its long hind feet in the same plane with its buttocks, while the short

fore feet appear like hands. Fur dark slate, under both brown and white hair. The droppings black, say one sixth inch long, cylindrical. Some of the whiskers are dark, some whitish. It has a rather large head, apparently curving forward or downward.[1] A very slight and delicate tinge of yellowish beneath between the fore legs.

It is undoubtedly the *Arvicola Emmonsii* of De Kay. It is a very pretty and neat little animal for a mouse, with its wholesome reddish-brown sides distinctly bounding on its pure white belly, neat white feet, large slate-colored ears which suggest circumspection and timidity, — ready to earth itself on the least sound of danger, — long tail, and *numerous* whiskers. This was caught in a dry and elevated situation, amid shrub oaks. It apparently, like the other, came up through a hole in the snow at the foot of a shrub oak (*Quercus ilicifolia*).

This tawny or reddish-brown color which belongs to the king of beasts and to the deer, singular that it should extend to this minute beast also![2]

A strong wind drying the earth which has been so very wet. The sand *begins* to be dry in spots on the railroad causeway. The northerly wind blows me along, and when I get to the cut I hear it roaring in the woods, all reminding me of March, March. The sides of the cut are all bare of snow, and the sand foliage is dried up. It is decided March weather, and I see from my window the bright-blue water here and there between the ice and on the meadow.

[1] *Vide* Mar. 12th. [2] *Vide* [p. 202]. *Vide* Mar. 10th.

The quadrupeds which I know that we have here in Concord are (*vide* Emmons, p. 5): —

Of Order	Family	
CARNIVORA. —	VESPERTILIONIDÆ.	One. Have we more of the three in the State?
	SORICIDÆ	Have we any?
	TALPIDÆ	*Condylura longicaudata*, Star-nose Mole. Have we not another of the three moles?
	URSIDÆ	*Procyon lotor*, the Raccoon.
	CANIDÆ	*Vulpes fulvus.*
	MUSTELIDÆ	*Mustela martes*, Pine Marten.
		Putorius vison, the Mink.
		Putorius vulgaris, Reddish Weasel.
		Putorius Noveboracensis, Ermine Weasel.
		Lutra Canadensis, Otter.
		Mephitis Americana.
RODENTIA	CASTORIDÆ	*Fiber zibethicus.*
	LEPORIDÆ	*Lepus Americanus.*
		Lepus Virginianus.
	MUSCIDÆ (altered to MURIDÆ on p. 59)	*Arvicola hirsutus*, Meadow Mouse, probably. (His *albo-rufescens* only a variety according

to Audubon and Bachman.)
Arvicola Emmonsii.[1]
Mus musculus, Common Mouse.
Mus rattus (?), Black Rat.
Mus decumanus, Wharf Rat, Brown Rat.
Arctomys monax, Woodchuck.
Sciurus leucotis, Little Gray Squirrel.
Sciurus Hudsonius.
Sciurus striatus.
Pteromys volucella.
Have we the *Gerbillus Canadensis*, Jumping mouse?

According to this we have at least twenty-one and perhaps twenty-six quadrupeds, — five and possibly six families of the Order *Carnivora*, and three families of the Order *Rodentia;* none of the Order *Ruminantia.* Nearly half of our quadrupeds belong to the *Muridæ*, or Rat Family, and a quarter of them to the *Mustelidæ*, or Weasel Family. Some, though numerous, are rarely seen, as the wild mice and moles. Others are very rare, like the otter and raccoon. The striped squirrel is the smallest quadruped that we commonly notice in our walks in the woods, and we do not realize, especially in summer, when their tracks are not visible, that the aisles of the wood are threaded by countless

[1] *Mus leucopus.*

wild mice, and no more that the meadows are swarming in many places with meadow mice and moles. The cat brings in a mole from time to time, and we see where they have heaved up the soil in the meadow. We see the tracks of mice on the snow in the woods, or once in a year one glances by like a flash through the grass or ice at our feet, and that is for the most part all that we see of them.

Though all the muskrat-cabins will be covered by an early rise of the river in the fall, you will yet see the greater part of them above the ice in midwinter, however high the water may be.

I frequently detect the track of a foreigner by the print of the nails in his shoes, both in snow and earth; of an india-rubber, by its being less sharply edged, and, most surely, often, by the fine diamond roughening of the sole. How much we infer from the dandy's narrow heel-tap, while we pity his unsteady tread, and from the lady's narrow slipper, suggesting corns, not to say consumption. The track of the farmer's cowhides, whose carpet-tearing tacks in the heel frequently rake the ground several inches before his foot finds a resting-place, suggests weight and impetus.

Feb. 21. Another *Arvicola Emmonsii*, a male; whole length six inches, tail three inches. This is very little reddish on the sides, but general aspect above dark-brown; though not iron-gray, yet reminding me of that; yet not the less like the hue of beasts in a menagerie. This may be a last year's mouse.

Audubon and Bachman say that when "it sheds

its hair late in spring . . . it assumes a bluish gray tint, a little lighter than that of the common mouse."

P. M. — To Fair Haven Hill *via* Cut.

A clear air, with a northwesterly, March-like wind, as yesterday. What is the peculiarity in the air that both the invalid in the chamber and the traveller on the highway say these are perfect March days? The wind is rapidly drying up earth, and elevated sands already begin to look whitish. How much light there is in the sky and on the surface of the russet earth! It is reflected in a flood from all cleansed surfaces which rain and snow have washed, — from the railroad rails and the mica in the rocks and the silvery latebræ of insects there, — and I never saw the white houses of the village more brightly white. Now look for an early crop of arrowheads, for they will shine.

When I have entered the wooded hollow on the east of the Deep Cut, it is novel and pleasant to hear the sound of the dry leaves and twigs, which have so long been damp and silent, more worn and lighter than ever, crackling again under my feet, — though there is still considerable snow about, along wall-sides, etc., — and to see the holes and galleries recently made by the mice (?) in the fine withered grass of such places, the upper aralia hollow there. I see the peculiar softened blue sky of spring over the tops of the pines, and, when I am sheltered from the wind, I feel the warmer sun of the season reflected from the withered grass and twigs on the side of this elevated hollow.

A warmth begins to be reflected from the partially

dried ground here and there in the sun in sheltered places, very cheering to invalids who have weak lungs, who think they may weather it till summer now. Nature is more genial to them. When the leaves on the forest floor are dried, and begin to rustle under such a sun and wind as these, the news is told to how many myriads of grubs that underlie them! When I perceive this dryness under my feet, I feel as if I had got a new sense, or rather I realize what was incredible to me before, that there is a new life in Nature beginning to awake, that her halls are being swept and prepared for a new occupant. It is whispered through all the aisles of the forest that another spring is approaching. The wood mouse listens at the mouth of his burrow, and the chickadee passes the news along.

We now notice the snow on the mountains, because on the remote rim of the horizon its whiteness contrasts with the russet and darker hues of our bare fields. I looked at the Peterboro mountains with my glass from Fair Haven Hill. I think that there can be no more arctic scene than these mountains in the edge of the horizon completely crusted over with snow, with the sun shining on them, seen through a telescope over bare, russet fields and dark forests, with perhaps a house on some remote, bare ridge seen against them. A silver edging, or ear-like handle, to this basin of the world. They look like great loaves incrusted with pure white sugar; and I think that this must have been the origin of the name "sugar-loaf" sometimes given to mountains, and not on account of their form. We look thus from russet fields into a landscape

still sleeping under the mantle of winter. We have already forgotten snow, and think only of frosted cake. The snow on the mountains has, in this case, a singular smooth and crusty appearance, and by contrast you see even single evergreens rising here and there above it and where a promontory casts a shadow along the mountains' side. I saw what looked like a large lake of misty bluish water on the side of the further Peterboro mountain, its edges or shore very distinctly defined. This I concluded was the shadow of another part of the mountain. And it suggested that, in like manner, what on the surface of the moon is taken for water may be shadows. Could not distinguish Monadnock till the sun shone on it.

I saw a train go by, which had in front a dozen dirt-cars [from] somewhere up country, laden apparently with some kind of earth (or clay?); and these, with their loads, were thickly and evenly crusted with unspotted snow, a part of that sugary crust I had viewed with my glass, which contrasted singularly with the bare tops of the other cars, which it had hitched on this side, and the twenty miles at least of bare ground over which they had rolled. It affected me as when a traveller comes into the house with snow on his coat, when I did not know it was snowing.

How plain, wholesome, and earthy are the colors of quadrupeds generally! The commonest I should say is the tawny or various shades of brown, answering to the russet which is the prevailing color of the earth's surface, perhaps, and to the yellow of the sands beneath. The darker brown mingled with this answers

to the darker-colored soil of the surface. The white of the polar bear, ermine weasel, etc., answers to the snow; the spots of the pards, perchance, to the earth spotted with flowers or tinted leaves of autumn; the black, perhaps, to night, and muddy bottoms and dark waters. There are few or no bluish animals.

Can it be true, as is said, that geese have gone over Boston, probably yesterday? It is in the newspapers.[1]

Feb. 22. P. M. — To J. Farmer's.

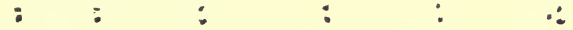
Remarkably warm and pleasant weather, perfect spring. I even listen for the first bluebird. I see a seething in the air over clean russet fields.[2] The westerly wind is rather raw, but in sheltered places it is deliciously warm. The water has so far gone down that I get over the Hunt Bridge causeway by going half a dozen rods on the wall in one place. This water must have moved two or three hundred cartloads of sand to the side of the road. This damage would be avoided by raising the road.

J. Farmer showed me an ermine weasel he caught in a trap three or four weeks ago. They are not very common about his barns. All white but the tip of the tail; two conspicuous canine teeth in each jaw. In summer they are distinguished from the red weasel, which is a little smaller, by the length of their tails, particularly, — six or more inches, while the red one's

[1] Henry Hosmer tells me (Mar. 17th) that he saw several flocks about this time!

[2] Also the 24th, which is very cold.

is not two inches long. He says their track is like that of the mink: —



as if they had only two legs. They go on the jump. Sometimes make a third mark. He saw one in the summer (which he called the red weasel, but, as he thought the red twice as big as the white, it may have been a white one) catch a striped squirrel thus: He was at work near the wall near his house when he saw a striped squirrel come out of the wall and jump along by the side of a large stone. When he had got two or three feet along it, as it were in the air, the weasel appeared behind him, and before he had got four feet had him by the throat. Said a man told him that he saw a weasel come running suddenly to an apple tree near which he was working, run round and round and up it, when a squirrel sitting on the end of a branch jumped off, and the weasel, jumping, had him before he touched the ground. He had no doubt that when the weasel ran round the tree he was on the track of the squirrel.

F. said he had many of the black rat, but none or very few of the wharf rats, on his premises. He had seen mice-nests twenty feet up trees. Three or four weeks ago he traced a mink by his tracks on the snow to where he had got a frog from the bottom of a ditch, — dug him out. Says that where many minnows are kept in a spring they will kill four or five hundred at once and pile them up on the bank. Showed me his spring, head of one of the sources of Dodge's Brook,

which by his mark is not a quarter of an inch higher now, when there is so much water on the surface, than it was in the midst of the great drought last summer. But the important peculiarity of it is that when, in a dry spell, this stream is dry fifteen or twenty rods from this source, it may suddenly fill again before any rain comes. This does not freeze, even for twenty rods. A pool in it, some dozen or more rods from source, where his cattle drink, he never saw frozen.

He had seen a partridge drum standing on a wall. Said it stood very upright and produced the sound by striking its wings together behind its back, as a cock often does, but did not strike the wall nor its body. This he is sure of, and declares that he is mistaken who affirms the contrary, though it were Audubon himself. Wilson says he "begins to strike with his stiffened wings" while standing on a log, but does not say what he strikes, though one would infer it was either the log or his body. Peabody says he beats his body with his wings.

The sun goes down to-night under clouds, — a round red orb, — and I am surprised to see that its light, falling on my book and the wall, is a beautiful purple, like the poke stem or perhaps some kinds of wine.

You see fresh upright green radical leaves of some plants — the dock, probably water dock, for one — in and about water now the snow is gone there, as if they had grown all winter.

Pitch pine cones must be taken from the tree at the right season, else they will not open or "blossom"

in a chamber. I have one which was gnawed off by squirrels, apparently of full size, but which does not open. Why should they thus open in the chamber or elsewhere? I suppose that under the influence of heat or dryness the upper side of each scale expands while the lower contracts, or perhaps only the one expands or the other contracts. I notice that the upper side is a lighter, almost cinnamon, color, the lower a dark (pitchy?) red.

Feb. 23. Clear, but a *very* cold north wind. I see great cakes of ice, a rod or more in length and one foot thick, lying high and dry on the bare ground in the low fields some ten feet or more beyond the edge of the thinner ice, which were washed up by the last rise (the 18th), which was some four inches higher than the former one.[1] Some of these great cakes, when the water going down has left them on a small mound, have bent as they settled, and conformed to the surface.

Saw at Walden this afternoon that that grayish ice which had formed over the large square where ice had been taken out for Brown's ice-house had a decided pink or rosaceous tinge. I see no cracks in the ground this year yet.

Mr. Loring says that he and his son George fired at white swans in Texas on the water, and, though G. shot two with ball and killed them, the others in each case gathered about them and crowded them off out of their reach.

[1] *Vide* the 26th.

Feb. 24. Clear, but very cold and windy for the season. Northerly wind; smokes blown southerly. Ground frozen harder still; but probably now and hereafter what ground freezes at night will in great part melt by middle of day. However, it is so cold this afternoon that there is no melting of the ground throughout the day.

The names of localities on the Sudbury River, the south or main branch of Concord or Musketaquid River, beginning at the mouth of the Assabet, are the Rock (at mouth), Merrick's Pasture, Lee's Hill, Bridge, Hubbard Shore, Clamshell Hill and fishing-place, Nut Meadow Brook, Hollowell Place and Bridge, Fair Haven Hill and Cliffs, Conantum opposite, Fair Haven Pond and Cliff and Baker Farm, Pole Brook, Lee's and Bridge, Farrar's or Otter Swamp, Bound Rock, Rice's Hill and 's [*sic*] Isle, the Pantry, Ware Hill, Sherman's Bridge and Round Hill, Great Sudbury Meadow and Tall's Isle, Causeway Bridges, Larned Brook, the Chestnut House, Pelham Pond, the Rapids.

I saw yesterday in Hubbard's sumach meadow a bunch of dried grass with a *few* small leaves inmixed, which had lain next the ground under the snow, probably the nest of a mouse or mole.

P. M. — To young willow-row near Hunt's Pond road.

Here is skating again, and there was some yesterday, the meadows being frozen where they had opened, though the water is fast going down. It is a thin ice

of one to two inches, one to three feet above the old, with yellowish water between. However, it is narrow dodging between the great cakes of the ice which has been broken up. The whole of the broad meadows is a rough, irregular checker-board of great cakes a rod square or more, — arctic enough to look at. The willow-row does not begin to look bright yet. The top two or three feet are red as usual at a distance, the lower parts a rather dull green. Inspecting a branch, I find that the bark is shrunk and wrinkled, and of course it will not peel. Probably when it shines it will be tense and smooth, all its pores filled.

Staples said the other day that he heard Phillips speak at the State-House. By thunder! he never heard a man that could speak like him. His words come so easy. It was just like picking up chips.

Minott says that Messer tells him he saw a striped squirrel (!) yesterday.[1] His cat caught a mole lately, not a star-nosed one, but one of those that heave up the meadow. She sometimes catches a little dark-colored mouse with a sharp nose. Tells of a Fisk of Waltham who, some thirty years ago, could go out with a club only and kill as many partridges as he could conveniently bring home. I suppose he knew where to find them buried in the snow. Both Minott and Farmer think they sometimes remain several days in the snow, if the weather is bad for them. Minott has seen twigs, he says, of apple, in their crops, three quarters of an inch long. Says he has seen them drum

[1] *Vide* Mar. 4th and 7th.

many times, standing on a log or a wall; that they strike the log or stone with their wings. He has frequently caught them in a steel trap without bait, covered with leaves and set in such places. Says that quails also eat apple buds.

I notice that, in the tracks, hens' toes are longer and more slender than partridges and more or less turned and curved one side.

The brightening of the willows or of osiers, — that is a season in the spring, showing that the dormant sap is awakened. I now remember a few osiers which I have seen early in past springs, thus brilliantly green and red (or yellow), and it is as if all the landscape and all nature shone. Though the twigs were few which I saw, I remember it as a prominent phenomenon affecting the face of Nature, a gladdening of her face. You will often fancy that they look brighter before the spring has come, and when there has been no change in them.

Thermometer at 10° at 10 P. M.

Feb. 25. Clear, cold, and windy. Thermometer at 7° at 7.30 A. M. Air filled with dust blowing over the fields. Feel the cold about as much as when it was below zero a month ago. Pretty good skating.

Feb. 26. Still clear and cold and windy. No thawing of the ground during the day. This and the last two or three days have been very blustering and unpleasant, though clear.

P. M. — To Clamshell Hill, across river.

I see some *cracks* in a plowed field, — Depot Field corn-field, — maybe recent ones. I think since this last cold snap, else I had noticed them before. Those great cakes of ice which the last freshet floated up on to uplands now lie still further from the edge of the recent ice. You are surprised to see them lying with perpendicular edges a foot thick on bare, grassy upland where there is no other sign of water, sometimes wholly isolated by bare grass there. In the last freshet the South Branch was only broken up on the meadows for a few rods in width next the shores. Where the ice did not rise with the water, but, apparently being frozen to the dry bottom, was covered by the water, — there and apparently in shallow places here, then far from the shore, the ground ice was at length broken and rose up in cakes, larger or smaller, the smaller of which were often floated up higher on to the shore by a rod or so than the ice had originally reached. Then, the water going down, when the weather became colder and froze, the new ice only reached part way up these cakes, which lay high and dry. It is therefore pretty good skating on the river itself and on a greater part of the meadows next the river, but it is interrupted by great cakes of ice rising above the general level near the shore.

Saw several of those rather small reddish-brown dor-bugs on the ice of the meadow, some frozen in. Were they washed out of their winter quarters by the freshet? Or can it be that they came forth of their own accord on the 22d? I cannot revive them by a fire.

C. says he saw a lark to-day close to him, and some other dark-colored spring bird.

Directly off Clamshell Hill, within four rods of it, where the water is three or four feet deep, I see where the musquash dived and brought up clams before the last freezing. Their open shells are strewn along close to the edge of the ice, and close together, for about three rods in one place, and the bottom under this edge of older ice, as seen through the new black ice, is perfectly white with those which sank. They may have been blown in, or the ice melted. The nacre of these freshly opened shells is very fair, — azure, or else a delicate salmon pink (?), or rosaceous, or violet. I find one not opened, but frozen, and several have one valve quite broken in two in the rat's effort to wrench them open, leaving the frozen fish half exposed. All the rest show the marks of their teeth at one end or the other, *i. e.*, sometimes at one end, sometimes at another. You can see distinctly, also, the marks of their teeth where they have scraped off, with a scraping cut, the tough muscles which fasten the fish to its shell, also sometimes all along the nacre next the edge. One shell has apparently a little caddis-case of iron-colored sand on it. These shells look uncommonly large thus exposed; at a distance like leaves. They lie thickly around the edge of each small circle of thinner black ice in the midst of the white, showing where was open water a day or two ago. At the beginning and end of winter, when the river is partly open, the ice serves them instead of other stool. Some are reddish-brown in thick and hard layers like iron ore out-

side; some have roundish copper-colored spots on the nacre within. This shows that this is still a good place for clams, as it was in Indian days.

Examined with glass some fox-dung (?) from a tussock of grass amid the ice on the meadow. It appeared to be composed two thirds of clay, and the rest a slate-colored fur and coarser white hairs, black-tipped, — too coarse for the deer mouse. Was it that of the rabbit? This mingled with small bones. A mass as long as one's finger.

Feb. 27. Another cold, clear day, but the weather gradually moderating.

Feb. 28. Still cold and clear. Ever since the 23d inclusive a succession of clear but very cold days in which, for the most part, it has not melted perceptibly during the day. My ink has frozen, and plants, etc., have frozen in the house, though the thermometer has not indicated nearly so great a cold as before. Since the 25th it has been very slowly moderating.

The skating began again the 24th after the great freshet had gone down some two feet or more, but that part of the old ice which was broken up by the freshet and floated from its place, either on to the upland or meadow or on to the firm ice, made it remarkably broken and devious, not to be used by night. The deep bays and sides of the meadows have presented a very remarkable appearance, a stretching pack of great cakes of ice, often two or more upon each other and partly tilted up, a foot thick and one to

two or more rods broad. The westering sun reflected from their edges makes them shine finely. In short, our meadows have presented and still present a very wild and arctic scene. Far on every side, over what is usually dry land, are scattered these great cakes of ice, the water having now gone down about five feet on the South Branch.

P. M. — To further railroad bridge and Ministerial Swamp.

I see that same kind of icicle terracing about the piers of Wood's Bridge and others that I saw, I think, last spring, but not now quite so perfect, as if where the water had stood at successive levels. The lower edge now about a foot or two above water.

Examined where the white maple and the apple tree were tipped over by the ice the other day at the railroad bridge. It struck them seven or eight feet from the ground, that being the height of the water, rubbed off the bark, and then bent flat and broke them. They were about ten inches in diameter, the maple partly dead before. I see where many trees have been wounded by the ice in former years. They have a hard time of it when a cake half a dozen rods in diameter and nearly two feet thick is floated and blown against them.

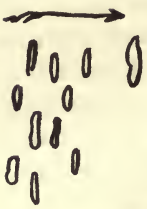
Just south of Derby's Bridge lie many great cakes, some one upon another, which were stopped by the bridge and causeway, and a great many have a crust of the meadow of equal thickness — six inches to one

foot — frozen to their under surfaces. Some of these are a rod in diameter, and when the ice melts, the meadow where they are landed will present a singular appearance. I see many also freshly deposited on the Elfin Burial-Ground, showing how that was formed. The greater part of those hummocks there are probably, if not certainly, carried by the ice, though I now see a few small but thick pieces of meadow four or five feet broad without any ice or appearance of its having been attached to them. This is a powerful agent at work. Many great cakes have lodged on a ridge of the meadow west of the river here, and suggest how such a ridge may be growing from year to year.

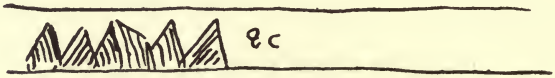
This North River is only partially open. I see where a bright gleam from a cake of ice on the shore is reflected in the stream with remarkable brightness, in a pointed, flame-like manner. Look either side you see it. Standing here, still above the Elfin Burial-Ground, the outlines of Heywood the miller's house in the distance against the pine and oak woods come dimly out, and by their color are in very pleasing harmony with this wood. I think it is a dull-red house against the usual mixture of red oak leaves and dark pines. There is such a harmony as between the gray limbs of an overshadowing elm and the lichen-clad roof.

We crossed the river at Nut Meadow Brook. The ice was nearly worn through all along there, with wave-like regularity, in oblong (round end) or thick crescent or kidney shaped holes, as if worn by the summits of

waves, — like a riddle to sift a man through. These



holes are hard to detect in some lights except by shaking the water. I saw some cakes of ice, ten feet across and one foot thick, lodged with one end on the top of a fence-post and some seven or eight feet in the air, the other on the bottom. There is a fine pack of large cakes away in the bay behind Hubbard's Grove. I notice, looking at their edges, that the white or rotted part extends downward in points or triangles, alternating with the sound greenish parts, thus: —



Most, however, are a thin white, or maybe snow ice, with all beneath solid and green still.

Found a hangbird's nest fallen from the ivy maple, composed wholly of that thread they wipe the locomotive with [1] and one real thread, all as it were woven into a perfect bag.

I have a piece of a limb (alder or maple?), say five eighths of an inch in diameter, which has been cut off by a worm boring spirally, but in one horizontal plane, three times round.

I observed how a new ravine is formed in a sand-hill. A new one was formed in the last thaw at Clamshell Hill thus: Much melted snow and rain being collected on the top of the hill, some apparently found its

[1] "Cotton waste."

way through the ground, frozen a foot thick, a few feet from the edge of the bank, and began with a small rill washing down the slope the unfrozen sand beneath. As the water continued to flow, the sand on each side continued to slide into it and be carried off, leaving the frozen crust above quite firm, making a bridge five or six feet wide over this cavern. Now, since the thaw, this bridge, I see, has melted and fallen in, leaving a *ravine* some ten feet wide and much longer, which now may go on increasing from year to year without limit, and thus the sand is *ravished* away. I was there just after it began.[1]

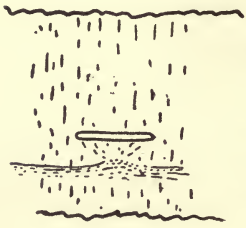
[1] Audubon and Bachman think a ravine may sometimes have been produced by the gallery of a shrew mole.

VII

MARCH, 1855

(ÆT. 37)

March 1. 10 A. M. — To Derby's Bridge and return by Sam Barrett's, to see ice cakes and meadow crust. The last day for skating. It is a very pleasant and warm day, the finest yet, with considerable coolness in the air, however, — winter still. The air is beautifully clear, and through [it] I love to trace at a distance the roofs and outlines of sober-colored farmhouses amid the woods. We go listening for bluebirds, but only hear crows and chickadees. A fine seething air over the fair russet fields. The dusty banks of snow by the railroad reflect a wonderfully dazzling white from their pure crannies, being melted into an uneven, sharp, wavy surface. This more dazzling white must be due to the higher sun. I see some thick cakes of ice where an ice-car has broken up. In one I detect a large bubble four inches in diameter about a foot beneath the upper surface and six inches from the lower.



In confirmation of my theory, the grain of the ice, as indicated by the linear bubbles within it, was converging beneath this bubble, as the rays of light under a burning-glass, and what was the under surface at that time was melted

in a concave manner to within one and a half inches of the bubble, as appeared by the curvature in the horizontal grain of the more recently formed ice beneath. I omit to draw the other horizontal grain. The situation of this bubble also suggests that ice perhaps increases more above than below the plane of its first freezing in the course of a winter, by the addition of surface water and snow ice.

Examined again the ice and meadow-crust deposited just south of Derby's Bridge. The river is almost down to summer level there now, being only three to four feet deep at that bridge. It has fallen about eight feet since February 17. The ice is piled up there three or four feet deep, and no water beneath, and most of the cakes, which are about one foot thick, have a crust of meadow of equal thickness (*i. e.* from six inches to a foot) attached beneath. I saw in one place three cakes of ice each with a crust of meadow frozen to it beneath, lying one directly upon another and all upon the original ice there, alternately ice and meadow, and the middle crust of meadow measured twenty-eight by twenty-two feet. In this case the earth was about six inches thick only for the most part, three to four feet high in all above original ice. This lay on a gentle ridge or swell between the main Derby Bridge and the little one beyond, and it suggested that that swell might have been thus formed or increased. As we went down the bank through A. Hosmer's land we saw great cakes, and even fields of ice, lying up high and dry where you would not suspect otherwise that water had been. Some have much of

the withered pickerel-weed, stem and leaves, in it, causing it to melt and break up soon in the sun. I saw one cake of ice, six inches thick and more than six feet in diameter, with a cake of meadow of exactly equal dimensions attached to its under side, exactly and evenly balanced on the top of a wall in a pasture forty rods from the river, and where you would not have thought the water ever came. We saw three white maples about nine inches in diameter which had been torn up, roots and sod together, and in some cases carried a long distance. One quite sound, of equal size, had been bent flat and broken by the ice striking it some six or seven feet from the ground. Saw some very large pieces of meadow lifted up or carried off at mouth of G. M. Barrett's Bay. One measured seventy-four by twenty-seven feet. Topped with ice almost always, and the old ice still beneath. In some cases the black, peaty soil thus floated was more than one and a half feet thick, and some of this last was carried a quarter of a mile without trace of ice to buoy it, but probably it was first lifted by ice. Saw one piece more than a rod long and two feet thick of black, peaty soil brought from I know not where. The edge of these meadow-crusts is singularly abrupt, as if cut with a turf-knife. Of course a great surface is now covered with ice on each side of the river, under which there is no water, and we go constantly *getting in* with impunity. The spring sun shining on the sloping icy shores makes numerous dazzling ice-blinks, still brighter, and prolonged with rectilinear

sides, in the reflection. I am surprised to find the North River more frozen than the South, and we can cross it in many places.

I think the meadow is lifted in this wise: First, you have a considerable freshet in midwinter, succeeded by severe cold before the water has run off much. Then, as the water goes down, the ice for a certain width on each side the river meadows rests on the ground, which freezes to it.[1] Then comes another freshet, which rises a little higher than the former. This gently lifts up the river ice, and that meadow ice on each side of it which still has water under it, without breaking them, but overflows the ice which is frozen to the bottom. Then, after some days of thaw and wind, the latter ice is broken up and rises in cakes, larger or smaller with or without the meadow-crust beneath it, and is floated off before the wind and current till it grounds somewhere, or melts and so sinks, frequently three cakes one upon another, on some swell in the meadow or the edge of the upland. The ice is thus with us a wonderful agent in changing the aspect of the surface of the river-valley. I think that there has been more meadow than usual moved this year, because we had so great a freshet in midwinter succeeded by severe cold, and that by another still greater freshet before the cold weather was past.

Saw a butcher-bird, as usual on top of a tree, and distinguished from a jay by black wings and tail and streak side of head.

[1] Or rather all the water freezes where it is shallow and the grass is frozen into it. *Vide* Mar. 11th.

I did well to walk in the forenoon, the fresh and inspiring half of this bright day, for now, at mid-afternoon, its brightness is dulled, and a fine stratus is spread over the sky.

Is not "the starry puff (*Lycoperdon stellatum*)" of the "Journal of a Naturalist," which "remains driving about the pastures, little altered until spring," my five-fingered fungus? The same tells of goldfinches (*Fringilla carduelis*) (Bewick calls it the "thistle-finch") "scattering all over the turf the down of the thistle, as they pick out the seed for their food." It is singular that in this particular it should resemble our goldfinch, a different bird.

March 2. Another still, warm, beautiful day like yesterday.

9 A. M. — To Great Meadows to see the ice.

Saw yesterday one of those small slender-winged insects on the ice. A. Wright says that about forty years ago an acre of meadow was carried off at one time by the ice on the Colburn place. D. Clark tells me he saw a piece of meadow, on his part of the Great Meadows, five or six rods square, which had been taken up in one piece and set down again a little distance off. I observe that where there is plowed ground much of it has been washed over the neighboring grass ground to a great distance, discoloring it.

The Great Meadows, as all the rest, are one great field of ice a foot thick to their utmost verge, far up the hillsides and into the swamps, sloping upward there, without water under it, resting almost every-

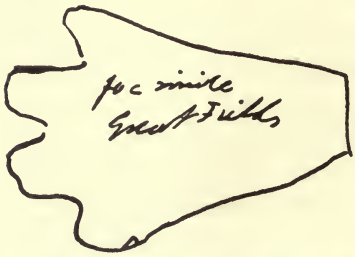
where on the ground; a great undulating field of ice, rolling prairie-like, — the earth wearing this dry, icy shield or armor, which shines in the sun. Over brooks and ditches, perhaps, and in many other places, the ice, a foot thick in some places, is shoved (?) or *puffed* up in the form of a pent-roof, in some places three feet high and stretching twenty or thirty rods. There is certainly more ice than can lie flat there, as if the adjacent ices had been moved toward each other. Yet this general motion is not likely, and it is more probably the result of the expansion of the ice under the sun and of the warmth of the water (?) there. In many places the ice is dark and transparent, and you see plainly the bottom on which it lies. The various figures in the partially rotted ice are very interesting, — white bubbles which look like coins of various sizes overlapping each other; parallel waving lines, with sometimes very slight intervals, on the under side of sloping white ice, marking the successive levels at which the water has stood;

also countless white cleavages, perpendicular or inclined, straight and zigzag, meeting and crossing each other at all possible angles, and making all kinds of geometrical figures, checkering the whole surface, like white frills or ruffles in the ice. (At length the ice melts on the edge of these cleavages into little gutters which catch the snow.) There is the greatest

noise from the ice cracking about 10 A. M., yesterday and to-day.

Where the last year's shoots or tops of the young white maples, at the *Salix Purshiana* shore, are brought together, as I walk, into a mass, a quarter of a mile off, with the sun on them, they present a fine dull-scarlet streak. Young twigs are thus more florid than the old wood, as if from their nearness to the flower, or like the complexion of children. You see thus a fine dash of red or scarlet against the distant hills, which near at hand or in their midst is wholly unobservable. I go listening, but in vain, for the warble of a bluebird from the old orchard across the river. I love to look now at the fine-grained russet hillsides in the sun, ready to relieve and contrast with the azure of the bluebirds.

I made a burning-glass of ice, which produced a slight sensation of warmth on the back of my hand, but was so untrue that it did not concentrate the rays to a sufficiently small focus.



Returning over Great Fields, found half a dozen arrowheads, one with three scallops in the base.

If we have a considerable freshet before the ice melts much, apparently much meadow crust will be moved on the South Branch. There is about six inches of frost in the swamps.

Heard two hawks scream. There was something truly March-like in it, like a prolonged blast or whistling of the wind through a crevice in the sky, which, like a cracked blue saucer, overlaps the woods. Such are the first rude notes which prelude the summer's quire, learned of the whistling March wind.

March 3. Saturday. P. M. — To Conantum.

This afternoon it is somewhat overcast for the first time since February 18th inclusive. I see a dirty-white miller fluttering about over the winter-rye patch next to Hubbard's Grove.

A few rods from the broad pitch pine beyond, I find a cone which was probably dropped by a squirrel in the fall, for I see the marks of its teeth where it was cut off; and it has probably been buried by the snow till now, for it has apparently just opened, and I shake its seeds out. Not only is this cone, resting upright on the ground, fully blossomed, a very beautiful object, but the winged seeds which half fill my hand, small triangular black seeds with thin and delicate flesh-colored wings, remind me of fishes, — alewives, perchance, — their tails more or less curved. I do not show the curve of the tail. I see, in another place under a pitch pine, many cores of cones which the squirrels have completely stripped of their scales, excepting the (about) three at extremity which cover no seeds, cutting them off regularly at the seeds or close to the core, leaving it in this form, or more regular: —

From some partially stripped I see that they begin at the base. These you find left on and about stumps where they have sat, and under the pines. Most fallen pitch pine cones show the marks of squirrels' teeth, showing they were cut off.

Day before yesterday there was good skating, and it was a beautiful warm day for it. Yesterday the ice began to be perceptibly softened. To-day it is too soft for skating.

I might have said on the 2d that though it is warm there is no trouble about getting on to the river, for, the water having fallen about six feet on the South Branch, the ice, about a foot thick, slopes upward in many places half a dozen rods or more on to the upland, like the side of an earthen milk-pan, and you do not know when you have passed the water-line.

Also I noticed yesterday that the ice, along the river-edge at the Great Meadows, still clinging to the alders and maples three or four feet from the ground, was remarkably transparent and solid, or without bubbles, like purest crystal, not rotted; probably because the rays of the sun passed through it, and there was no surface beneath to reflect them back again and so rot the ice. Of this I made my burning-glass.

I think it was yesterday morning that I first noticed

a frost on the bare russet grass. This, too, is an early spring phenomenon. I am surprised to see that the radical johnswort leaves, which have been green all winter, are now wilted and blackened by it, and where a wood was cut off this winter on a hillside, all the rattlesnake-plantain has suffered in like manner.

Again I observe the river breaking up (from the bank). The thin and rotted ice, saturated with water, is riddled with oblong open places, whose prevailing form is curving *commonly* up-stream, though not always, — *i. e.* southerly *here*. Has this anything to do with the direction of the prevailing winds of winter, which make the waves bend southerly? Since the cold of a week ago — they may be of older date — I see many tracks in the earth, especially in plowed fields, which are cracked up into vast cakes in some places, apparently on the same principle that ice is.

March 4. *Sunday*. River *channel* fairly open.

P. M. — To Bee Tree Hill over Fair Haven Pond.

For some time, or since the ground has been bare, I have noticed the spider-holes in the plowed land. We go over the Cliffs. Though a cold and strong wind, it is very warm in the sun, and we can sit in the sun where sheltered on these rocks with impunity. It is a genial warmth. The rustle of the dry leaves on the earth and in the crannies of the rocks, and gathered in deep windrows just under their edge, midleg deep, reminds me of fires in the woods. They are almost

ready to burn. I see a fly on the rock. The ice is so much rotted and softened by the sun that it looks white like snow now as I look down on the meadows. There is considerable snow on the north side of hills in the woods. At the Bee Hill-side, a striped squirrel, which quickly dives into his hole at our approach.[1] May not this season of springlike weather between the first decidedly springlike day and the first bluebird, already fourteen days long, be called the *striped squirrel spring?* In which we go listening for the bluebird, but hear him not.

Returning by the Andromeda Ponds, I am surprised to see the red ice visible still, half a dozen rods off. It is melted down to the red bubbles, and I can tinge my finger with it there by rubbing it in the rotted ice.

March 5. P. M. — To Beck Stow's.

A strong but warm southwesterly (?) wind, which has produced a remarkable haze. As I go along by Sleepy Hollow, this strong, warm wind, rustling the leaves on the hillsides, this blue haze, and the russet earth seen through it, remind me that a new season has come. There was the less thick, more remotely *blue*, haze of the 11th February, succeeded by a thaw, beginning on the 14th. Will not rain follow this much thicker haze?

March 6. To Second Division Brook.

Still stronger wind, shaking the house, and rather cool. This the third day of wind.

[1] *Vide* Mar. 7th.

Our woods are now so reduced that the chopping of this winter has been a cutting to the quick. At least we walkers feel it as such. There is hardly a wood-lot of any consequence left but the chopper's axe has been heard in it this season. They have even infringed fatally on White Pond, on the south of Fair Haven Pond, shaved off the topknot of the Cliffs, the Colburn farm, Beck Stow's, etc., etc.

Observed a mouse or mole's nest in the Second Division Meadow, where it had been made under the snow, — a nice warm globular nest some five inches in diameter, amid the sphagnum and cranberry vines, etc., — made of dried grass and lined with a still finer grass. The hole was on one side, and the bottom was near two inches thick. There were many small paths or galleries in the meadow leading to this from the brook some rod or more distant.

The small gyrinus is circling in the brook. I see where much fur of a rabbit, which probably a fox was carrying, has caught on a moss rose twig as he leaped a ditch. It is much worse walking than it has been for ten days, the continual warmth of the sun melting the ice and snow by walls, etc., and reaching the deeper frost, unexpectedly after the surface had been dry. Pastures which look dry prove soft and full of water.

There is a peculiar redness in the western sky just after sunset. There are many great dark, slate-colored clouds floating there, seen against more distant and thin, wispy, bright-vermilion (?), almost blood-red ones. This in many places appears as the lining of the former.

It rained last evening, but not much. This the first rain or storm since February 18th inclusive, *i. e.* fifteen days. The weather began to be decidedly springlike, — air full of light, etc., — the 18th. The 20th was perfect March. The 21st and 22d were remarkably fair and warm; 23d to 28th inclusive remarkably clear and cold; March 1st and 2d remarkably clear and serene and pleasant. Since then colder, with increasing wind and some clouds, with last night some rain.

The sands are too dry and light-colored to show arrowheads so well now.

I see many places where after the late freshet the musquash made their paths under the ice, leading from the water, a rod or two, to a bed of grass above the water-level.

March 7. P. M. — To Red-Ice Pond.

A raw east wind and rather cloudy.

Methinks the buds of the early willows, the willows of the railroad bank, show more of the silvery down than ten days ago.

Did I not see crows flying northeasterly yesterday toward night?

The redness in the ice appears mostly to have evaporated, so that, melted, it does not color the water in a bottle.

Saw, about a hemlock stump on the hillside north of the largest Andromeda Pond, very abundant droppings of some kind of mice, on that common green moss (forming a firm bed about an inch high, like little pines, surmounted by a fine red stem with a green point, in

all three quarters of an inch high), which they had fed on to a great extent, evidently when it was covered with snow, shearing it off level. Their droppings could be collected by the hand probably, ⬭ a light brown above, green next the earth. There were apparently many of their holes in the earth about the stump. They must have fed very extensively on this moss the past winter.[1]

It is now difficult getting on and off Walden. At Brister's Spring there are beautiful dense green beds of moss, which apparently has just risen above the surface of the water, tender and compact. I see many tadpoles of medium or full size in deep warm ditches in Hubbard's meadow. They may probably be seen as soon as the ditches are open, thus earlier than frogs. At his bridge over the brook it must have been a trout I saw glance, — rather dark, as big as my finger. To-day, as also three or four days ago, I saw a clear drop of maple sap on a broken red maple twig, which tasted very sweet. The *Pyrola secunda* is a perfect evergreen. It has lost none of its color or freshness, with its thin ovate finely serrate leaves, revealed now the snow is gone. It is more or less branched.

Picked up a very handsome white pine cone some six and a half inches long by two and three eighths near base and two near apex, perfectly blossomed. It is a very rich and wholesome brown color, of various shades as you turn it in your hand, — a light ashy or gray brown, somewhat like unpainted wood, as you look down on it, or as if the lighter brown were cov-

[1] *Vide* Mar. 14th.

ered with a gray lichen, seeing only those parts of the scales always exposed, — with a few darker streaks or marks (\\\ ) and a drop of pitch at the point of each scale. Within, the scales are a dark brown above (*i. e.* as it hangs) and a light brown beneath, very distinctly being marked beneath by the same darker brown, down the centre and near the apex somewhat anchorwise.

We were walking along the sunny hillside on the south of Fair Haven Pond (on the 4th), which the choppers had just laid bare, when, in a sheltered and warmer place, we heard a rustling amid the dry leaves on the hillside and saw a striped squirrel eying us from its resting-place on the bare ground. It sat still till we were within a rod, then suddenly dived into its hole, which was at its feet, and disappeared. The first pleasant days of spring come out like a squirrel and go in again.[1]

March 8. P. M. — To old Carlisle road.

Another fair day with easterly wind.

This morning I got my boat out of the cellar and turned it up in the yard to let the seams open before I calk it. The blue river, now almost completely open (*i. e.* excepting a little ice in the recesses of the shore and a good deal over the meadows), admonishes me to be swift.

I see where many young trees and bushes have been broken down by the ice after the last freshet, many of

[1] [Channing, p. 285.]

Loring's young maples, for example. The cornel and other bushes along the walls are broken like young trees by snowdrifts, the ice, sinking with them in its embrace, weighing or dragging them down. In many places, where the water rose so high as to reach the ends of the lower branches of white maples and these were afterward frozen in, the ice, sinking with the ebb, breaks off or strips down the branch.[1] There appears to be a motion to the ice (even on meadows away from the current and at Walden shore) somewhat like that of a glacier, by which it tips over the trees, etc., standing in it without breaking up, — the result, one would say, of its swelling under the influence of the sun.

Was surprised to see a cluster of those large leek buds on a rock in Clark's (?) meadow between the oak and my house that was.

Daniel Clark tells me that on his part of the Great Meadows there is a hole just about the breadth and depth of a man, commonly full of water. He does not know what made it.

I crossed through the swamp south of Boulder Field toward the old dam. Stopping in a sunny and sheltered place on a hillock in the woods, — for it was raw in the wind, — I heard the hasty, shuffling, as if frightened, note of a *robin* from a dense birch wood, — a sort of *tche tche tche tche tche*, — and then probably it dashed through the birches; and so they fetch the year about. Just from the South Shore, perchance, it alighted not in the village street, but in this remote birch wood. This sound reminds me of rainy, misty

[1] *Vide* Mar. 14th.

April days in past years. Once or twice before, this afternoon, I thought I heard one and listened, but in vain.

I still see the bluish bloom on thimble-berry vines quite fresh. I walk these days along the brooks, looking for tortoises and trout, etc. They are full of a rust-colored water, as if they flowed out of an iron mine. As the ice melts in the swamps I see the horn-shaped buds of the skunk-cabbage, green with a bluish bloom, standing uninjured, ready to feel the influence of the sun, — the most prepared for spring — to look at — of any plant. I see of late more than before of the fuzzy caterpillars, both black and reddish-brown.

March 9. A cloudy, rain-threatening day, not windy and rather warmer than yesterday.

Painted the bottom of my boat.

P. M. — To Andromeda Ponds.

Scare up a rabbit on the hillside by these ponds, which was gnawing a smooth sumach. See also where they have gnawed the red maple, sweet-fern, *Populus grandidentata,* white and other oaks (taking off considerable twigs at four or five cuts), amelanchier, and sallow; but they seem to prefer the smooth sumach to any of these. With this variety of cheap diet they are not likely to starve. I get a few drops of the sweet red maple juice which has run down the main stem where a rabbit had nibbled off close a twig. The rabbit, indeed, lives, but the sumach may be killed.

The heart-wood of the poison-dogwood, when I break it down with my hand, has a singular rotten, yellow look and a spirituous or apothecary odor.

As, on the 4th, I clambered over those great white pine masts which lay in all directions one upon another on the hillside south of Fair Haven, where the woods have been laid waste, I was struck, in favorable lights, with the jewel-like brilliancy of the sawed ends thickly bedewed with crystal drops of turpentine, thickly as a shield, as if the dryads (?), oreads (?), pine-wood nymphs had seasonably wept there the fall of the tree. The perfect sincerity of these terebinthine drops, each one reflecting the world, colorless as light, or like drops of dew heaven-distilled and trembling to their fall, is incredible when you remember how firm their consistency. And is this that pitch which you cannot touch without being defiled?

Looking from the Cliffs, the sun being as before invisible, I saw far more light in the reflected sky in the neighborhood of the sun than I could see in the heavens from my position, and it occurred to me that the reason was that there was reflected to me from the river the view I should have got if I had stood there on the water in a more favorable position.

I see that the mud in the road has crystallized as it dried (for it is not nearly cold enough to freeze), like the first crystals that shoot and set on water when freezing.

I see the minute seeds of the *Andromeda calyculata* scattered over the melting ice of the Andromeda Ponds.

C. says he saw yesterday the slate-colored hawk with a white bar across tail, — meadow hawk, *i. e.* frog hawk. Probably finds moles and mice.

An overcast and dark night.

March 10. Snowed in the night, a mere whitening. In the morning somewhat overcast still, cold and quite windy. The first clear snow to whiten the ground since February 9th.

I am not aware of growth in any plant yet, unless it be the further peeping out of willow catkins. They have crept out further from under their scales, and, looking closely into them, I detect a little redness along the twigs even now. You are always surprised by the sight of the first spring bird or insect; they seem premature, and there is no such evidence of spring as themselves, so that they literally *fetch* the year about. It is thus when I hear the first robin or bluebird or, looking along the brooks, see the first water-bugs out circling. But you think, They have come, and Nature cannot recede. Thus, when on the 6th I saw the gyrinus at Second Division Brook, I saw no peculiarity in the water or the air to remind me of them, but to-day they are here and yesterday they were not. I go looking deeper for tortoises, when suddenly my eye rests on these black circling apple-seeds in some smoother bay.

The red squirrel should be drawn with a pine cone. Those reddening leaves, as the checkerberry, lambkill, etc., etc., which at the beginning of winter were greenish, are now a deeper red, when the snow goes off. No more snow since last *night*, but a strong, cold northerly wind all day, with occasional gleams of sunshine. The whitening of snow consequently has not disappeared.

Miss Minott says that Dr. Spring told her that when the sap began to come up into the trees, *i. e.* about the middle of February (she says), then the diseases of the human body come out. The idea is that man's body sympathizes with the rest of nature, and his pent-up humors burst forth like the sap from wounded trees. This with the mass may be that languor or other weakness commonly called spring feelings.

Minott tells me that Henry Hosmer says he saw geese two or three days ago!

Jacob Farmer gave me to-day a part of the foot probably of a pine marten, which he found two or three days ago in a trap he had set in his brook for a mink, — under water, baited with a pickerel. It is clothed above with a glossy dark-brown hair, and contains but two toes (perhaps a third without the talon), armed with fine and very sharp talons, much curved. It had left thus much in the trap and departed.

Audubon and Bachman call my deer mouse "*Mus Leucopus*, Rafinesque," American White-Footed Mouse; call it "yellowish brown above" and give these synonyms: —

"*Mus Sylvaticus*, Forster, Phil. Trans., vol. lxii., p. 380.
Field-Rat, Penn., Hist. Quad., vol. ii., p. 185.
Field-Rat, Arctic Zoöl., vol. i., p. 131.
Musculus Leucopus, Rafinesque, Amer. Month. Review, Oct. 1818, p. 444.
Mus Leucopus, Desmar. Mamm., esp. 493.
Mus Sylvaticus, Harlan, Fauna, p. 151.
Mus Agrarius, Godm., Nat. Hist., vol. ii., p. 88.
Mus Leucopus, Richardson, F. B. A., p. 142.
Arvicola Nuttallii, Harlan, variety.

Arvicola Emmonsii, Emm., Mass. Report, p. 61.
Mus Leucopus, Dekay, Nat. Hist. N. Y., pl. 1, p. 82."

By fur he does not mean the short inner hair only. Says they are larger in Carolina than in the Eastern States, but he does not describe any larger than mine. "Next to the common mouse, this is the most abundant and widely diffused species of mouse in North America. We have received it . . . from every State in the Union, and from Labrador, Hudson's Bay, and the Columbia River." Has found it "taking up its abode in a deserted squirrel's nest, thirty feet from the earth."

"They have been known to take possession of deserted birds' nests — such as those of the cat-bird, red-winged starling, song thrush, or red-eyed fly-catcher." "We have also occasionally found their nests on bushes, from five to fifteen feet from the ground. They are in these cases constructed with nearly as much art and ingenuity as the nests of the Baltimore Oriole." Of some he has, says, "They are seven inches in length and four in breadth, the circumference measuring thirteen inches; they are of an oval shape and are outwardly composed of dried moss and a few slips of the inner bark of some wild grape-vine; other nests are more rounded, and are composed of dried leaves and moss." Thinks two pairs live in some very large ones. "The entrance in all the nests is from below, and about the size of the animal."

Female sometimes escapes with her young adhering to her teats. "Nocturnal in its habits." Only sound he has heard from them "a low squeak." Not so carniv-

orous as "most of its kindred species." Troubles trappers by getting their bait. Lays up "stores of grain and grass seeds," acorns, etc. In the North, wheat; in the South, rice. Eats out the heart of Indian corn kernels.

Thinks it produces two litters in a season in the North and three in the South. Foxes, owls, etc., destroy it. Thinks the ermine weasel its most formidable foe. Thinks it *sometimes* occupies a chipping squirrel's hole. Thinks that neither this nor the mole does much injury to garden or farm, but rather "the little pine-mouse (*Arvicola pinetorum*, Le Conte), or perhaps Wilson's meadow-mouse (*Arvicola Pennsylvanica*, Ord, *A. hirsutus*, Emmons, and Dekay)." Yet Northern farmers complain that the deer mouse gnaws young fruit trees, etc.; maybe so. Avoids houses, at least those where there are wharf rats and cats.

Observed this afternoon some celandine by Deacon Brown's fence, apparently grown about an inch. *Vide* if it is really springing.

March 11. P. M. — To Annursnack.

Clear and rather pleasant; the ground again bare; wind northerly. I am surprised to see how rapidly that ice that covered the meadows on the 1st of March has disappeared under the influence of the sun alone. The greater part of what then lay on the meadows a foot thick has melted, — two thirds at least.

On Abel Hosmer's pasture, just southeast of the stone bridge, I see where the sod was lifted up over a great space in the flood of the 17th of February. There is one bare place there, showing only the fine

and now white roots of grass, seven rods long by two or three. There are other smaller ones about it. The sod carried off is from four to six inches thick commonly. Pieces of this crust, from a quarter to a third the size mentioned, are resting within ten or twenty rods. One has sunk against the causeway bridge, being too wide to go through. I see one piece of crust, twelve feet by six, turned completely topsyturvy with its ice beneath it. This has prevented the ice from melting, and on examining it I find that the ice did not settle down on to the grass after the water went down and then freeze to it, for the blades of grass penetrate one inch into the ice, showing that, the water being shallow, the whole froze, and the grass was frozen in, and thus, when the water rose again, was lifted up. The bared places I have noticed as yet were not in the low ground, but where the water was comparatively shallow, commonly at a distance from the river.[1]

A bluebird day before yesterday in Stow.[2]

Saw a cake of recent ice very handsomely marked as it decayed, with darker marks for the original crystals centred with the original white. It would be a rare pattern for a carpet, because it contains a variety of figures agreeable to the eye without regularity.

Many of those dirty-white millers or ephemeræ in the air.

As I sit at the base of Annursnack the earth appears almost completely bare, but from the top I see considerable white ice here and there. This shows that what is left is only the whitened and rotting ice, which,

[1] *Vide* [p. 245]. [2] Next page.

being confined to the lowest hollows and meadows, is only observed from a height.

At this season, — before grass springs to conceal them, — I notice those pretty little roundish shells on the tops of hills; one to-day on Annursnack.

I see pitch pine needles looking as if whitewashed, thickly covered on each of the two slopes of the needle with narrow, white, oyster-shell-like latebræ or chrysalids of an insect.

March 12. 6.30 A. M. — To Andromeda Ponds.

Lesser redpolls still.[1]

Elbridge Hayden and Poland affirm that they saw a brown thrasher sitting on the top of an apple tree by the road near Hubbard's and singing after his fashion on the 5th. I suggested the shrike, which they do not know, but they say it was a *brown* bird.

Hayden saw a bluebird yesterday.

P. M. — To Great Meadows.

Comes out pleasant after a raw forenoon with a flurry of snow, already gone.

Two ducks in river, good size, white beneath with black heads, as they go over.[2] They first rise some distance down-stream, and fly by on high, reconnoitring me, and I first see them on wing; then settle a quarter of a mile above by a long slanting flight, at last opposite the swimming-elm below Flint's. I come on up the bank with the sun in my face; start them again. Again they fly down-stream by me on high, turn and

[1] *Vide* forward.

[2] Sheldrakes?

come round back by me again with outstretched heads, and go up to the Battle-Ground before they alight. Thus the river is no sooner fairly open than they are back again, — before I have got my boat launched, and long before the river has worn through Fair Haven Pond. I think I heard a quack or two.

Audubon and Bachman say that Forster and Harlan refer the *Mus leucopus* "to *Mus sylvaticus* of Europe," — wrongly, for they differ in many respects. "They may always be distinguished from each other at a glance by the following mark: in more than twenty specimens we examined of *Mus sylvaticus* [in Europe][1] we have always found a yellowish line edged with dark-brown, on the breast. In many hundred specimens of *Mus leucopus* we have without a single exception found this yellow line entirely wanting, all of them being pure white on the breast, as well as on the whole under surface. We have no hesitation in pronouncing the species distinct." Now I find that I had described my specimen of February 20th, before I had read Audubon and Bachman or heard of the *Mus sylvaticus*, as having "a very slight and delicate tinge of yellowish beneath, between the fore legs," though Emmons does not mention this color. The other differences they mention certainly are not of much importance, and probably equally great ones are to be found between different specimens of *Mus leucopus*.

March 13. Northern lights last night. Rainbow in east this morning.

[1] [The brackets are Thoreau's.]

Almost all the meadow-crust now (and for a week past) lies on a cake of ice where it lodged and which, being prevented from melting any further than its edge, is of the same size with it. The crust is frozen on to this, and, the ice which first froze to it and raised it having melted some time ago, most would not know how to account for its position.

6.30 A. M. — To Hill.

Still, but with some wrack here and there. The river is low, very low for the season. It has been falling ever since the freshet of February 18th. Now, about sunrise, it is nearly filled with the thin, half-cemented ice-crystals of the night, which the warmer temperature of day apparently has loosened. They grate against the bushes and wheel round in great fields with a slight crash and piling up.

I hear the rapid tapping of the woodpecker from over the water.

P. M. — To Hubbard's Close.

For a week the more stagnant brooks and ditches have been green with conferva, a kind of green veil that conceals their bottom and invests the bubbles on the surface.

I am surprised to see, not only many pollywogs through the thin ice of the warm ditches, but, in still warmer, stagnant, unfrozen holes in this meadow, half a dozen small frogs, probably *Rana palustris*.[1] Green spires of grass stand perfectly upright in these pools, rising above water.

[1] Is it not the croaker?

Coming through the stubble of Stow's rye-field in front of the Breed house, I meet with four mice-nests in going half a dozen rods. They lie flat on the ground amid the stubble; are flattened spheres, the horizontal diameter about five inches, the perpendicular considerably less, composed of grass or finer stubble, and on taking them up you do not at once detect the entrance with your eye, but rather feel it with your finger on the side; lined with the finest of the grass. These were undoubtedly — probably — made when the snow was on the ground, for their winter residence, while they gleaned the rye-field, and when the snow went off they scampered to the woods. I think they were made by the *Mus leucopus, i. e. Arvicola Emmonsii.* Similar to that of March 6th in meadow, except that was thicker against wet.

I look into many woodchucks' holes, but as yet they are choked with leaves and there is no sign of their having come abroad.

At evening the raw, overcast day concludes with snow and hail. Two pickerel caught in Flint's Pond to-day weighed on the Mill-Dam to-night $7\frac{3}{4}+$ or nearly 8 pounds.

March 14. Three inches of snow in the morning, and it snows a little more during the day, with occasional gleams of sunshine. Winter back again in prospect, and I see a few sparrows, probably tree sparrows, in the yard.

P. M. — To Andromeda Ponds.

At one of the holes under the stump of March 7th,

caught a *Mus leucopus* (deer mouse). So this was the kind, undoubtedly, that fed on the moss, and that colored their droppings. It is in very good condition; extreme length six and a half, tail three inches. It is a less *reddish* brown on the sides and cheeks than my whole skin, and a darker brown above, mixed with a little reddish; no yellow tinge on breast. Some whiskers, as usual, are white, others black, and I count the "six tubercles on each palm." There are no tracks about the stump, for they are not abroad by day, *i. e.* since the last of this snow, but probably there will be tracks to-morrow morning. Thus it is generally. If it ceases snowing in the morning, you see few, if any, tracks in your walk, but the next morning many.

It is the first and last snows — especially the last — which blind us most, when the sun is most powerful and our eyes are unused to them.

I observe the tracks of sparrows leading to every little sprig of blue-curls amid the other weeds which (its seemingly empty pitchers) rises above the snow. There seems, however, to be a little seed left in them. This, then, is reason enough why these withered stems still stand, — that they may raise these granaries above the snow for the use of the snowbirds.

That ice of February has destroyed almost the whole of Charles Hubbard's young red maple swamp in front of the Hollowell place. Full an acre of thrifty young maples, as well as alders and birches four to seven feet high, is completely destroyed, being pulled and broken down (broken near the ground) as the ice sank after the water went down. It is all flat, and

looks at a little distance as if one had gone through with a bush-whack and done his work faithfully. They [are] from half an inch to one inch thick, broken this wise: He has apparently concluded to clear it. Only the taller birches, etc., are left. I thought, as I approached, seeing some clumps still standing, all the rest flat on the ground, that without a doubt some one had been clearing the swamp, though I stood within a rod of it. Just as a snow-drift breaks down young fruit-trees. R. Rice tells me that a great many young white pines in a swamp of his in Sudbury have been barked, the bark rubbed down several inches completely bare by the ice. Thus the river from time to time asserts its authority over its swamps to a great distance.[1]

March 15. Jacob Farmer gave me to-day the foot of an otter, also of a fisher, — to put with my pine marten's foot. He cut them off of recent furs in Boston. He sells about a hundred mink skins in a year. Thinks not more than thirty or forty are caught in Concord in a year. He says (I think) a mink's skin is worth two dollars! They are sent to Europe to be worn there, not for hats.

Foul weather all day, — at first a fine snow, and finally rain. Now, at 9 P. M., a clear sky. And so the storm which began evening of 13th ends.

[1] The willows, alders, etc., all along the river where the water was deeper are commonly broken higher up, three or four feet from the ground. This Mar. 19th. *Vide* Mar. 20th.

As for the first half of this month, it began very pleasant and warm (the latter third of February had been very clear and pleasant but colder), the river opening and ice beginning to soften; then on the 4th it became windy (northerly, east, or southwest), sometimes very cold and raw, occasionally rocking the house; the 9th a little warmer, storm threatening; the 10th, ground whitened with snow; and so it goes on, more or less raw till the snow of the 14th.

Mr. Rice tells me that when he was getting mud out of the little swamp at the foot of Brister's Hill last [a blank space left for the day], he heard a squeaking and found that he was digging near the nest of what he called a "field mouse," — by his description probably the meadow mouse. It was made of grass, etc., and, while he stood over it, the mother, not regarding him, came and carried off the young, one by one, in her mouth, being gone some time in each case before she returned, and finally she took the nest itself.

He saw a bluebird about a week ago in Sudbury, and [was] surprised to observe that it had a worm in its mouth, but I am not, for the ice and snow have been sprinkled with caterpillars of several kinds all the past winter.

March 16. Cloudy in the forenoon. Sun comes out and it is rather pleasant in the afternoon.

P. M. — To Conantum End.

At the woodchuck's hole just beyond the cockspur thorn, I see several diverging and converging trails of

undoubtedly a woodchuck, or several, which must have come out at least as early as the 13th. The track is about one and three quarters inches wide by two long, the five toes very distinct and much spread, and, including the *scrape* of the snow before the foot came to its bearing, is somewhat hand-like.

It is simple and alternate, thus: commonly, but sometimes much like a rabbit's, and again like a mink's, somewhat thus: They had come out and run about directly from hole to hole, six in all, within a dozen rods or more. This appeared to have been all their travelling, as if they had run round a-visiting and waked each other up the first thing. At first they soiled the snow with their sandy feet. At one place they had been clearing out to-day the throats of two holes within a rod of each other, scattering the mud-like sand, made wet by the melting snow, over the pure snow around; and I saw where, between these holes, they had sat on a horizontal limb of a shrub oak (which it had tried its teeth on), about a foot from the ground, also on a rock, plainly to warm and dry themselves in the sun, having muddied it all over. I also saw where another had sunned itself on a stone at the foot of a small pitch pine and tried its teeth on a dead limb of the pine. They could not go in or out of these burrows without being completely covered with sandy mud. The path over the snow between these holes was quite covered with it.

The impression of the foot a little like this,

but not so much spread: They have but four toes on the fore feet, with rudiment of a thumb.

His first journey, then, appears to be to some neighboring hole which he remembers, a dozen or fifteen rods off, and, perchance, he goes as straight or unerringly to it as if he had not been asleep all winter. Apparently after a little gossiping there his first work is to clear out the entrance to his burrow, ejecting the leaves and sand which have there collected. None have travelled beyond these holes, except that one track leads into the swamp. But here are the tracks of foxes bound on longer journeys. They are generally ten or twelve inches apart by three to five, but are irregular, now two

at the usual distance, then two close together, three or four inches apart only. The foot is very shapely and much like a dog's.

The dirty-colored aspen down there projects an eighth of an inch, or nearly as much as the early willows.

As I stand here, some sixty rods from the river, at about 3.30 P. M., looking at the open river, toward which my shadow points at right angles with its current, that part which my shadow extended would

strike is a pale dull slate-color, but that part a dozen rods southerly from this is a distinct blue, which goes on increasing in depth southerly, till, looking at an angle of forty-five degrees from the first line, it is of a glorious, deep indigo blue. For some reason I must look much further north to see it blue.

River not yet worn through Fair Haven Pond.

You are pretty sure to see the tracks of squirrels, red ones, about the base of walnuts which they have ascended, and where they have probed the snow for a nut.

I think that a great many birds' nests are broken up in summer by weasels, minks, and skunks.

Returning, scared up two large ducks just above the bridge. One very large; white beneath, breast and neck; black head and wings and aft. The other much smaller and dark. Apparently male and female. They lit more than a hundred rods south of the bridge, and I viewed them with glass. The larger sailed about on the watch, while the smaller, dark one dived repeatedly.[1] I think there are but three ducks ever seen here anything like these, — the golden-eye or whistler, the goosander or sheldrake, and the red-breasted merganser.[2] This male I suspect was too large for the first, and, from its size and its great superiority in size to its companion, I think it the goosander or sheldrake. It did not scoot over the water as I think the red-breasted merganser [3] does.

[1] *Vide* Apr. 1st.

[2] ["Red-breasted merganser" is crossed out with pencil, and "Is it not female goosander?" written over it.]

[3] [Two interrogation-points in pencil here.]

March 17. *Saturday.* H. Hosmer says he has seen black ducks. Edmund Hosmer's meadow, *i. e.* the Hunt house meadow, is covered with great pieces of meadow, the largest thick and dense cranberry meadow. It is piled three or four feet high for several rods. Higher up on the North Branch I see where the trees, especially the swamp white oaks, have been chafed smooth and white by the ice (at that time), from the ground to three or four feet (six in some cases), as if scraped with a hoe, and the bushes all along the shore — willows, alders, etc., etc. (blueberry swamps in some places) — have been more or less broken down. I hear the lesser redpolls yet.[1] See now along the edge of the river, the ice being gone, many fresh heaps of clam-shells, which were opened by the musquash when the water was higher, about some tree where the ground rises. And very many places you see where they formed new burrows into the bank, the sand being pushed out into the stream about the entrance, which is still below water, and you feel the ground undermined as you walk.

White maple blossom-buds look as if bursting; show a rusty, fusty space, perhaps a sixteenth of an inch in width, over and above the regular six scales.[2]

I see scraps of the evergreen ranunculus along the riverside.

March 18. Fair in the forenoon, but more or less cloudy and windy in the afternoon.

[1] The last.

[2] [There is an interrogation-point in the margin against this paragraph.]

P. M. — Round by Hollowell place *via* Clamshell.

I see with my glass as I go over the railroad bridge, sweeping the river, a great gull standing far away on the top of a muskrat-cabin which rises just above the water opposite the Hubbard Bath. When I get round within sixty rods of him, ten minutes later, he still stands on the same spot, constantly turning his head to every side, looking out for foes. Like a wooden image of a bird he stands there, heavy to look at; head, breast, beneath, and rump pure white; slate-colored wings tipped with black and extending beyond the tail, — the herring gull. I can see clear down to its webbed feet. But now I advance, and he rises easily, goes off northeastward over the river with a leisurely flight. At Clamshell Hill I sweep the river again, and see, standing midleg deep on the meadow where the water is very shallow with deeper around, another of these wooden images, which is harder to scare. I do not fairly distinguish black tips to its wings. It is ten or fifteen minutes before I get him to rise, and then he goes off in the same leisurely manner, stroking the air with his wings, and now making a great circle back on its course, so you cannot tell which way it is bound. By standing so long motionless in these places they may perchance accomplish two objects, *i. e.*, catch passing fish (suckers?) like a heron and escape the attention of man. Its utmost motion was to plume itself once and turn its head about. If it did not move its head, it would look like a decoy. Our river is quite low for the season, and yet it is here without freshet

or easterly storm. It *seems* to take this course on its migrations without regard to the state of the waters.

Meanwhile a small dark-colored duck, all neck and wings, a winged rolling-pin, went over, — perhaps a teal.

For the last two or three days very wet and muddy walking, owing to the melting of the snow; which also has slightly swollen the small streams.

Some vigorous osiers about the trunk of some golden willows on the Hubbard Bridge causeway have all winter been a much brighter yellow than the rest of the trees. They cannot well be more brilliant any time.

Notwithstanding the water on the surface, it is easier crossing meadows and swamps than it will be a month hence, on account of the frost in the ground.

March 19. A fine clear and warm day for the season. Launched my boat.

P. M. — Paddled to Fair Haven Pond.

Very pleasant and warm, when the wind lulls and the water is perfectly smooth. I make the voyage without gloves. The snow of March 14th is about gone, and the landscape is once more russet. The thick ice of the meadows lies rotting on each side of the stream, white and almost soft as snow. In many places it extends still over the shallower parts of the river. As I paddle or pole up the side of the stream, the muddy bottom looks dark and dead, and no greenness is observed but on a close scrutiny. The unsightly dead leaf-stalks of the pontederia cover it in irregular whorls covered

with filth. The black stems of the polygonums here and there still rise above the surface. But on a closer scrutiny you detect here and there bits of the evergreen ranunculus (commonly floating), the cress, some reddish pads of nuphar expanded close to the bottom, and a few points of its closely rolled, unexpanded leaves, also some radical greenness in the pontederia. And what is that fresh green oblong, perhaps spatulate, leaf one and a half inches long, making little rosettes on a running root, in one place just this side the ash above the railroad?[1] There is this radical greenness to correspond with that on the land. The muskrat-houses are for the most part flatted down, even below the present level of the water (at least five feet and more below the truss), probably by the water and ice a month ago. I see but three or four well repaired. One new one at least, however, on a piece of meadow lately lodged. It is to be inferred that they have not the same need of them as in the fall. Already Farrar is out with his boat looking for spring cranberries, and here comes, slowly paddling, the dark-faced trapper Melvin with his dog and gun.[2] I see a poor drowned gray rabbit floating, back up as in life, but three quarters submerged. I see a hawk circling over a small maple grove through this calm air, ready to pounce on the first migrating sparrow that may have arrived. As I paddle or push along by the edge of the thick ice which lines the shore, sometimes pushing against it, I observe that it is curiously worn by the

[1] It is forget-me-not.

[2] See him out here the first boating day next year also.

water into this form: the dotted line being the water's edge. The water has eaten into the edge of the ice just where its surface meets it (which may be one and a half inches beneath the top), four or five inches or more, leaving a sharp projecting eave above, while the lower part, five or six inches thick, being preserved hard by the water, slopes off to a very sharp edge from one to even four feet from the upper. The undulations made by my boat and paddle, striking under this eave, make a constant sound as I pass. I am surprised to find that the river has not yet worn through Fair Haven Pond. Getting up a weed with the paddle close to the shore under water, where five or six inches deep, I found a fishworm in the mud. Here and there, floating or on the edge of the ice, I see small pieces of nuphar root, with a few rolled, pointed leaf-buds, probably gnawed off by the musk-rats. The greater part of the Wood meadow this side Clamshell has been lifted up and settled again, and it now sounds hollow and sinks under my steps.

The wind has got round more to the east now, at 5 P. M., and is raw and disagreeable, and produces a bluish haze or mist at once in the air. It is early for such a phenomenon. *Smelled* muskrats in two places, and saw two. Saw, by their white droppings on the bottom, where ducks had fed. I hear at last the *tchuck tchuck* of a blackbird and, looking up, see him flying high over the river southwesterly, — the wrong way, — in great haste to reach somewhere; and when I reach my landing I hear my first bluebird, somewhere

about Cheney's trees by the river. I hear him out of the blue deeps, but do not yet see his blue body. He comes with a warble. Now first generally heard in the village. Not a duck do I see. It is perhaps too bright and serene a day for them.

March 20. A flurry of snow at 7 A. M. I go to turn my boat up. Four or five song sparrows are flitting along amid the willows by the waterside. Probably they came yesterday with the bluebirds. From distant trees and bushes I hear a faint tinkling *te te te te té* and at last a full strain whose rhythm is *whit whit whit, ter tche, tchear tche,* deliberately sung, or measuredly, while the falling snow is beginning to whiten the ground, — not discouraged by such a reception. The bluebird, too, is in the air, and I detect its blue back for a moment upon a picket.

It is remarkable by what a gradation of days which we *call* pleasant and warm, beginning in the last of February, we come at last to real summer warmth. At first a sunny, calm, serene winter day is pronounced spring, or reminds us of it; and even the first pleasant spring day perhaps we walk with our greatcoat buttoned up and gloves on.

Trying the other day to imitate the honking of geese, I found myself flapping my sides with my elbows, as with wings, and uttering something like the syllables *mow-ack* with a nasal twang and twist in my head; and I produced their note so perfectly in the opinion of the hearers that I thought I might possibly draw a flock down.

P. M. — Up Assabet.

It soon cleared off in the morning, and proved a fair but windy day. I see a willow six inches in diameter which was broken down by the ice, and some birches up the Assabet, which had previously been bent over the stream, were broken off ten feet from the ground. I notice this havoc along the stream on making my first voyages on it. The ice either freezes to the alders, etc., one half to two thirds up them, and settling, breaks them lower down, settling upon them, or else freezes to drooping limbs and so pulls them down. As I look into the low woods or swamp on each side, I see the trees, especially rough-barked ones like the black willow, swamp white oak, and elm, chafed white to the height of three or four feet, sometimes the bark worn off, and, the maples, birches, etc., being also divested of their lichens, you see exactly the height at which the water stood when it froze. The lower twigs of swamp white oaks over the water are, as it were, nibbled off by the ice. Were those rocks by the shore this side the Leaning Hemlocks placed there by the ice?

Some willow catkins, whose limb was bent down and held in the ice, are three eighths of an inch long, *i. e.* the down beyond the scale. I see maple sap flowing and taste it sweet in many places where the branches have been stripped down. In the meadow near the stone-heaps I pace a space laid bare by the ice, — fourteen rods by one to four, nearly a quarter of an acre. The crust raised is commonly only four or five inches thick, or down to where the grass roots break; and it is taken principally from the higher parts of

a meadow, covered at the time of the freezing frequently from a longitudinal swell. We notice the color of the water especially at this season when it is recently revealed (*vide* 16th), and in the fall, because there is little color elsewhere, — when it is seen in contrast with the ice or snow or russet landscape. It shows best in a clear air contrasting with the russet shores. At my landing I hear the peculiar *tche tche, tche tche* — or somewhat like that — of the *F. hyemalis*, in company with a few tree sparrows. They take refuge from the cold wind, half a dozen in all, behind an arbor-vitæ hedge, and there plume themselves with puffed-up feathers.

March 21. 6.30 A. M. — To Swamp Bridge Brook.

Clear, but a very cold westerly wind this morning. Ground frozen very hard. Yet the song sparrows are heard from the willow and alder rows. Hear a lark far off in the meadow.

P. M. — To Bare Hill by railroad.

Early willow and aspen catkins are very conspicuous now. The silvery down of the former has in some places crept forth from beneath its scales a third of an inch at least. This increased silveriness was obvious, I think, about the first of March, perhaps earlier. It appears to be a very gradual expansion, which begins in the warm days of winter. It would be well to observe them once a fortnight through the winter. It is the first decided growth I have noticed, and is probably a month old.

The song sparrow is now seen dodging behind the wall, with a quirk of its tail, or flitting along the alders or other bushes by the side of the road, especially in low ground, and its pleasant strain is heard at intervals in spite of the cold and blustering wind. It is the most steady and resolute singer as yet, its strain being heard at intervals throughout the day, more than any as yet *peopling* the hedgerows.

There is no opening in Flint's Pond except a very little around the boat-house. The tree sparrow, flitting song-sparrow-like through the alders, utters a sharp metallic *tcheep*. In the hollow behind Britton's Camp, I see seven mouse-holes — probably *Mus leucopus* — around an old oak stump, all within a foot of it, and many of their droppings at each hole and where they have gnawed off the grass, and indistinct galleries in the grass, extending three or four feet on every side. I see red maple sap oozing out and wetting the young trees where there is no obvious wound. Crossed Goose Pond on ice.

March 22. 6.30 A. M. — To Hill.

Overcast and cold. Yet there is quite a concert of birds along the river; the song sparrows are very lively and musical, and the blackbirds already sing *o-gurgle-ee-e-e* from time to time on the top of a willow or elm or maple, but oftener a sharp, shrill whistle or a *tchuck*. I also hear a short, regular robin song, though many are flitting about with hurried note. The bluebird faintly warbles, with such ventriloquism that I thought him further off. He requires a warmer air. The jays

scream. I hear the downy woodpecker's rapid tapping and *my* first distinct spring note (*phe-be*) of the chickadee.

The river has skimmed over a rod in breadth along the sides. Saw a heavy-flapping, bittern-like bird flying northeast. It was small for a fish hawk. Can it be the stake-driver? ? or a gull?

A (probably meadow) mouse nest in the low meadow by stone bridge, where it must have been covered with water a month ago; probably made in fall. Low in the grass, a little dome four inches in diameter, with no sign of entrance, it being *very* low on one side. Made of fine meadow-grass.

Though there was a clear strip in the west only about three times the height of the mountains, and much less in the east, I saw the sun shining on the Peterboro mountains while we had not had a ray from him. Did the rays at this hour (seven) pass over the clouds which shaded us? They may have passed further north than the clouds reached, for there seemed a lifting in the horizon there.

P. M. — Fair Haven Pond *via* Conantum.

Caught a salamander in the spring-hole in the brook behind Hubbard's. It was lying on the mud in water as if basking. I have not yet identified it. It has no bright spots, being uniformly dark above, except to a microscope, beneath bluish-slate, beneath and sides of tail dull-golden. Three and a quarter inches long; tail alone one and a half plus; a dozen or more marks as of ribs on each side. Under microscope all above

very finely sprinkled black and light brown, — hard to tell which the ground. Somewhat like *Salamandra dorsalis*, but not granulated nor ocellated with vermilion spots. Irides dull-golden. Last five-eighths inch of tail lighter-colored.

I have noticed crows in the meadows ever since they were first partially bare, three weeks ago.

I hear a song sparrow on an alder-top sing *ozit ozit oze-e-e* | (quick) *tchip tchip tchip tchip tchay* | *te tchip ter che ter tchay;* also the same shortened and *very much* varied. Heard one sing uninterruptedly, *i. e.* without a pause, almost a minute. I crossed Fair Haven Pond, including the river, on the ice, and probably can for three or four days yet.

C. says he has already seen a little dipper. How long?

Going [along] the steep side-hill on the south of the pond about 4 P. M., on the edge of the little patch of wood which the choppers have not yet levelled, — though they have felled many an acre around it this winter, — I observed a rotten and hollow hemlock stump about two feet high and six inches in diameter, and instinctively approached with my right hand ready to cover it. I found a flying squirrel in it, which, as my left hand had covered a small hole at the bottom, ran directly into my right hand. It struggled and bit not a little, but my cotton glove protected me, and I felt its teeth only once or twice. It also uttered three or four dry shrieks at first, something like *cr-r-rack cr-r-r-ack cr-r-r-ack.* I rolled it up in my handkerchief and, holding the ends tight, carried it home in my hand,

some three miles. It struggled more or less all the way, especially when my feet made any unusual or louder noise going through leaves or bushes. I could count its claws as they appeared through the handkerchief, and once it got its head out a hole. It even bit through the handkerchief.

Color, as I remember, above a chestnut ash, inclining to fawn or cream color (?), slightly browned; beneath white, the under edge of its wings (?) tinged yellow, the upper dark, perhaps black, making a dark stripe. Audubon and Bachman do not speak of any such stripe! It was a very cunning little animal, reminding me of a mouse in the room. Its very large and prominent black eyes gave it an interesting innocent look. Its very neat flat, fawn-colored, distichous tail was a great ornament. Its "sails" were not very obvious when it was at rest, merely giving it a flat appearance beneath. It would leap off and upward into the air two or three feet from a table, spreading its "sails," and fall to the floor in vain; perhaps strike the side of the room in its upward spring and endeavor to cling to it. It would run up the window by the sash, but evidently found the furniture and walls and floor too hard and smooth for it and after some falls became quiet. In a few moments it allowed me to stroke it, though far from confident.

I put it in a barrel and covered it for the night. It was quite busy all the evening gnawing out, clinging for this purpose and gnawing at the upper edge of a sound oak barrel, and then dropping to rest from time to time. It had defaced the barrel considerably by morn-

ing, and would probably have escaped if I had not placed a piece of iron against the gnawed part. I had left in the barrel some bread, apple, shagbarks, and cheese. It ate some of the apple and one shagbark, cutting it quite in two transversely.

In the morning it was quiet, and *squatted* somewhat curled up amid the straw, with its tail passing under it and the end curled over its head very prettily, as if to shield it from the light and keep it warm. I always found it in this position by day when I raised the lid.

March 23. P. M. — To Fair Haven Pond.

Carried my flying squirrel back to the woods in my handkerchief. I placed it, about 3.30 P. M., on the very stump I had taken it from. It immediately ran about a rod over the leaves and up a slender maple sapling about ten feet, then after a moment's pause sprang off and skimmed downward toward a large maple nine feet distant, whose trunk it struck three or four feet from the ground. This it rapidly ascended, on the opposite side from me, nearly thirty feet, and there clung to the main stem with its head downward, eying me. After two or three minutes' pause I saw that it was preparing for another spring by raising its head and looking off, and away it went in admirable style, more like a bird than any quadruped I had dreamed of and far surpassing the impression I had received from naturalists' accounts.[1] I marked the spot it started from and the place where it struck, and mea-

[1] *Vide* next page.

sured the height and distance carefully. It sprang off from the maple at the height of twenty-eight and a half feet, and struck the ground at the foot of a tree fifty and a half feet distant, measured horizontally. Its flight was not a *regular* descent; it varied from a direct line both horizontally and vertically. Indeed it skimmed much like a hawk and part of its flight was nearly horizontal, and it diverged from a right line eight or ten feet to the right, making a curve in that direction. There were six trees from six inches to a foot in diameter, one a hemlock, in a direct line between the two termini, and these it skimmed partly round, and passed through their thinner limbs; did not as I could perceive touch a twig. It skimmed its way like a hawk between and around the trees. Though it was a windy day, this was on a steep hillside away from the wind and covered with wood, so it was not aided by that. As the ground rose about two feet, the distance was to the absolute height as fifty and a half to twenty-six and a half, or it advanced about two feet for every one foot of descent. After its vain attempts in the house, I was not prepared for this exhibition. It did not fall heavily as in the house, but struck the ground gently enough, and I cannot believe that the mere extension of the skin enabled it to skim so far. It must be still further aided by its organization. Perhaps it fills itself with air first. Perhaps I had a fairer view than common of its flight, now at 3.30 P. M. Audubon and Bachman say *he* saw it skim "about fifty yards," curving upwards at the end and alighting on the trunk of a tree. This in a meadow

in which were scattered oaks and beeches. This near Philadelphia. Wesson [?] says he has seen them fly five or six rods.

Kicking over the hemlock stump, which was a mere shell with holes below, and a poor refuge, I was surprised to find a little nest at the bottom, open above just like a bird's nest, a mere bed. It was composed of leaves, shreds of bark, and dead pine-needles. As I remember, it was not more than an inch and a half broad when at rest, but when skimming through the air I should say it was four inches broad. This is the impression I now have. Captain John Smith says it is said to fly thirty or forty yards. Audubon and Bachman quote one Gideon B. Smith, M. D., of Baltimore, who has had much to do with these squirrels and speaks of their curving upward at the end of their flight to alight on a tree-trunk and of their "flying" into his windows. In order to perform all these flights, — to strike a tree at such a distance, etc., etc., — it is evident it must be able to steer. I should say that mine steered as a hawk that moves without flapping its wings, never being able, however, to get a new impetus after the first spring.

C. saw geese to-night.

March 24. I think that the celandine *started* as early as the 10th of March and has since been nibbled off by hens, etc., for it shows more green but [is] not longer.

P. M. — Up Assabet by boat.

A cold and blustering afternoon after a flurry of

snow which has not fairly whitened the ground. I see a painted tortoise at the bottom moving slowly over the meadow. They do not yet put their heads out, but merely begin to venture forth into their calmer element. It is almost as stationary, as inert, as the pads as yet.

Passing up the Assabet, by the Hemlocks, where there has been a slide and some rocks have slid down into the river, I think I see how rocks come to be found in the midst of rivers. Rivers are continually changing their channels, — eating into one bank and adding their sediment to the other, — so that frequently where there is a great bend you see a high and steep bank or hill on one side, which the river washes, and a broad meadow on the other. As the river eats into the hill, especially in freshets, it undermines the rocks, large and small, and they slide down, alone or with the sand and soil, to the water's edge. The river continues to eat into the hill, carrying away all the lighter parts [of] the sand and soil, to add to its meadows or islands somewhere, but leaves the rocks where they rested, and thus in course of time they occupy the middle of the stream and, later still, the middle of the meadow, perchance, though it may be buried under the mud. But this does not explain how so many rocks lying in streams have been split in the direction of the current. Again, rivers appear to have travelled back and worn into the meadows of their creating, and then they become more meandering than ever. Thus in the course of ages the rivers wriggle in their beds, till it feels comfortable under them. Time is cheap and rather insignificant.

It matters not whether it is a river which changes from side to side in a geological period or an eel that wriggles past in an instant.

The scales of alders which have been broken by the ice and are lying in the water are now visibly loosened, as you look endwise at the catkins, and the catkins are much lengthened and enlarged. The white maple buds, too, show some further expansion methinks (?).

The last four days, including this, have been very cold and blustering. The ice on the ponds, which was rapidly rotting, has somewhat hardened again, so that you make no impression on it as you walk. I crossed Fair Haven Pond yesterday, and could have crossed the channel there again. The wind has been for the most part northwesterly, but yesterday was strong southwesterly yet cold. The northwesterly comes from a snow-clad country still, and cannot but be chilling. We have had several flurries of snow, when we hoped it would snow in earnest and the weather be warmer for it. It is too cold to think of those signs of spring which I find recorded under this date last year. The earliest signs of spring in vegetation noticed thus far are the maple sap, the willow catkins (and poplars ? not examined early), the celandine (?), grass on south banks, and *perhaps* cowslip in sheltered places. Alder catkins loosened, and also white maple buds loosened (?).

I am not sure that the osiers are decidedly brighter yet.

March 25. P. M. — To Ministerial Lot.

Still cold and blustering. The ditches where I have seen salamanders last year before this are still frozen up. Was it not a sucker I saw dart along the brook beyond Jenny's? I see where the squirrels have fed extensively on the acorns now exposed on the melting of the snow. The ground is strewn with the freshly torn shells and nibbled meat in some places.

March 26. 6 A. M. — Still cold and blustering; wind southwest, but clear.

I see a muskrat-house just erected, two feet or more above the water and sharp; and, at the Hubbard Bath, a mink comes teetering along the ice by the side of the river. I am between him and the sun, and he does not notice me. He runs daintily, lifting his feet with a jerk as if his toes were sore. They seem to go a-hunting at night along the edge of the river; perhaps I notice them more at this season, when the shallow water freezes at night and there is no vegetation along the shore to conceal them.

The lark sings, perched on the top of an apple tree, *seel-yah seel-yah*, and then perhaps *seel-yah-see-e*, and several other strains, quite sweet and plaintive, contrasting with the cheerless season and the bleak meadow. Further off I hear one like *ah-tick-seel-yah*.

P. M. — Sail down to the Great Meadows.

A strong wind with snow driving from the west and thickening the air. The farmers pause to see me scud before it. At last I land and walk further down on the meadow-bank. I scare up several flocks of ducks. There is but little water on the meadow,

and that far down and partly frozen, but a great many acres of the meadow-crust have there been lifted and broken up by the ice and now make hundreds of slanting isles amid the shallow water, looking like waves of earth, and amid these the ducks are sailing and feeding. The nearest are two, apparently middle-sized with black heads, white breast and wings and apparently all above but the tail or tips of wings, which are black.[1] A third with them is apparently all dark. I do not know what to call them. You are much more sure to see ducks in a stormy afternoon like this than in a bright and pleasant one. Returning, I see, near the Island, two ducks which have the marks (one of them) of the wood duck (*i. e.* one or two longitudinal white stripes down the head and neck), but when they go over I hear distinctly and for a long time the whistling of their wings, fine and sharp. Are they golden-eyes, or whistlers?[2]

For several weeks, or since the ice has melted, I notice the paths made by the muskrats when the water was high in the winter, leading from the river up the bank to a bed of grass above or below the surface. When it runs under the surface I frequently slump into it and can trace it to the bed by the hollow sound when I stamp on the frozen ground. They have disfigured the banks very much in some places, only the past winter. Clams have been carried into these galleries a rod or more under the earth. The galleries kept on

[1] Probably sheldrakes.

[2] [Later:] Were they the harlequin duck? [Later still:] Probably male and female wood duck.

the surface and terminated perhaps at some stump where the earth was a little raised, where the ice still remained thick over them after the water had gone down.

I was surprised to find fishworms only four inches beneath the surface in the meadow, close against the frozen portion of the crust. A few may also be found on the bottom of brooks and ditches in the water, where they are probably food for the earliest fishes. Is that little flat moss-like or jungermannia-like plant on Cheney's shore the *Selaginella apus?* It reminds me of the finest lace-work.

March 27. 6.30 A. M. — To Island.

The ducks sleep these nights in the shallowest water which does not freeze, and there may be found early in the morning. I think that they prefer that part of the shore which is permanently covered.

Snow last evening, about one inch deep, and now it [is] fair and somewhat warmer. Again I see the tracks of rabbits, squirrels, etc. It would be a good time this forenoon to examine the tracks of woodchucks and see what they are about.

P. M. — To Hubbard's Close and down brook.

Measured a black oak just sawed down. Twenty-three inches in diameter on the ground, and fifty-four rings. It had grown twice as much on the east side as on the west. The *Fringilla linaria* still here. Saw a wood tortoise in the brook. Am surprised to see the cowslip so forward, showing so much green, in

E. Hubbard's Swamp, in the brook, where it is sheltered from the winds. The already expanded leaves rise above the water. If this is a spring growth,[1] it is the most forward herb I have seen, as forward as the celandine.

Saw my frog hawk. (C. saw it about a week ago.) Probably *Falco fuscus*, or sharp-shinned, though not well described by Wilson. Slate-colored; beating the bush; black tips to wings and white rump.[2]

March 28. P. M. — To Cliffs, along river.

It is colder than yesterday; wind strong from northwest. The mountains are still covered with snow. They have not once been bare. I go looking for meadow mice nests, but the ground is frozen so hard, except in the meadow below the banks, that I cannot come at them. That portion of the meadow next the upland, which is now thawed, has already many earthworms in it. I can dig a quantity of them, — I suspect more than in summer. Moles might already get their living there. A yellow-spotted tortoise in a still ditch, which has a little ice also. It at first glance reminds me of a bright freckled leaf, skunk-cabbage scape, perhaps. They are generally quite still at this season, or only slowly put their heads out (of their shells). I see where a skunk (apparently) has been probing the sod, though it is thawed but a few inches, and all around this spot frozen hard still. I dig up there a frozen and dead white grub, the large potato grub; this I think he was after. The skunk's nose has made

[1] Yes. [2] No, it is the hen-harrier [*i. e.* marsh hawk], male.

small round holes such as a stick or cane would make. The river has not yet quite worn its way through Fair Haven Pond, but probably will to-morrow.

I run about these cold and blustering days, on the whole perhaps the worst to bear in the year, — partly because they disappoint expectation, — looking almost in vain for some animal or vegetable life stirring. The warmest springs hardly allow me the glimpse of a frog's heel as he settles himself in the mud, and I think I am lucky if I see one winter-defying hawk or a hardy duck or two at a distance on the water. As for the singing of birds, — the few that have come to us, — it is too cold for them to sing and for me to hear. The bluebird's warble comes feeble and frozen to my ear. We still walk on frozen ground, though in the garden I can thrust a spade in about six inches.

Over a great many acres, the meadows have been cut up into great squares and other figures by the ice of February, as if ready to be removed, sometimes separated by narrow and deep channels like musk-rat-paths, but oftener the edges have been raised and apparently stretched and, settling, have not fallen into their places exactly but lodged on their neighbors.

Even yet you see cakes of ice surmounted by a shell of meadow-crust, which has preserved it, while all around is bare meadow.

March 29. P. M. — To Flint's Pond.

Flint's Pond is entirely open; may have been a day or two. There was only a slight opening about the

boat-house on the 21st, and the weather has been very cold ever since.

Walden is more than half open, Goose Pond only a little about the shores, and Fair Haven Pond only *just* open over the channel of the river. There is washed up on the shore of Flint's some pretty little whorls of the radical leaves of the *Lobelia Dortmanna*, with its white root-fibres.

As I stand on Heywood's Peak, looking over Walden, more than half its surface already sparkling blue water, I inhale with pleasure the cold but wholesome air like a draught of cold water, contrasting it in my memory with the wind of summer, which I do not thus eagerly swallow. This, which is a chilling wind to my fellow, is decidedly refreshing to me, and I swallow it with eagerness as a panacea. I feel an impulse, also, already, to jump into the half-melted pond. This cold wind is refreshing to my palate, as the warm air of summer is not, methinks. I love to stand there and be blown on as much as a horse in July. A field of ice nearly half as big as the pond has drifted against the eastern shore and crumbled up against it, forming a shining white wall of its fragments.

March 30. 6.30 A. M. — To Island.

It is a *little* warmer than of late, though still the shallows are skimmed over.

The pickerel begin to dart from the shallowest parts not frozen. I hear many *phe-be* notes from the chickadees, as if they appreciated this slightly warmer and sunny morning.

A fine day. As I look through the window, I actually *see* a warmer atmosphere with its fine shimmer against the russet hills and the dry leaves, though the warmth has not got into the house and it is no more bright nor less windy than yesterday, or many days past. I find that the difference to the eye is a slight haze, though it is but very little warmer than yesterday.

To-day and yesterday have been bright, windy days, — west wind, cool, yet, compared with the previous colder ones, pleasantly, gratefully cool to me on my cheek. There is a very perceptible greenness on our south bank now, but I cannot detect the slightest greenness on the south side of Lee's Hill as I sail by it. It is a perfectly dead russet.

The river is but about a foot above the lowest summer level.

I have seen a few *F. hyemalis* about the house in the morning the last few days. You see a few blackbirds, robins, bluebirds, tree sparrows, larks, etc., but the song sparrow chiefly is heard these days.

He must have a great deal of life in him to draw upon, who can pick up a subsistence in November and March. Man comes out of his winter quarters this month as lean as a woodchuck. Not till late could the skunk find a place where the ground was thawed on the surface. Except for science, do not travel in such a climate as this in November and March. I tried if a fish would take the bait to-day; but in vain; I did not get a nibble. Where are they? I read that a great many bass were taken in the Merri-

mack last week. Do not the suckers move at the same time?

March 31. I see through the window that it is a very fine day, the first really warm one. I did not know the whole till I came out at 3 P. M. and walked to the Cliffs.

The slight haze of yesterday has become very thick, with a southwest wind, concealing the mountains. I can see it in the air within two or three rods, as I look against the bushes. The fuzzy gnats are in the air, and bluebirds, whose warble is thawed out. I am uncomfortably warm, gradually unbutton both my coats, and wish that I had left the outside one at home. I go listening for the croak of the first frog, or peep of a hylodes.

It is suddenly warm, and this amelioration of the weather is incomparably the most important fact in this vicinity. It is incredible what a revolution in our feelings and in the aspect of nature this warmer air alone has produced. Yesterday the earth was simple to barrenness, and dead, — *bound out.* Out-of-doors there was nothing but the wind and the withered grass and the cold though sparkling blue water, and you were driven in upon yourself. Now you would think that there was a sudden awakening in the very crust of the earth, as if flowers were expanding and leaves putting forth; but not so; I listen in vain to hear a frog or a new bird as yet; only the frozen ground is melting a little deeper, and the water is trickling down the hills in some places. No, the change is

mainly in us. We feel as if we had obtained a new lease of life. Some juniper (*repens*) berries are blue now. Looking from the Cliffs I see that Walden is open to-day first, and Fair Haven Pond will open by day after to-morrow.[1]

[1] No. *Vide* Apr. 4th.

VIII

APRIL, 1855

(ÆT. 37)

April 1. The month comes in true to its reputation. We wake, though late, to hear the sound of a strong, steady, and rather warm rain on the roof, and see the puddles shining in the road. It lasts till the middle of the day, and then is succeeded by a cold northwest wind. This pattering rain and Sabbath morning combined make us all sluggards.

When I look out the window I see that the grass on the bank on the south side of the house is already much greener than it was yesterday. As it cannot have grown so suddenly, how shall I account for it? I suspect that the reason is that the few green blades are not merely washed bright by the rain, but erect themselves to imbibe its influence, and so are more prominent, while the withered blades are beaten down and flattened by it. It is remarkable how much more fatal to all superficial vegetation or greenness is a morning frost in March than a covering of snow or ice. In hollows where the ice is still melting I see the grass considerably green about its edges, though further off it shows no sign of life.

P. M. — To Conantum End.

This rain will help take the frost out of the ground.

At the first Conantum Cliff I am surprised to see how much the columbine leaves have grown in a sheltered cleft; also the cinquefoil, dandelion (?), yarrow (?), sorrel, saxifrage, etc., etc. They seem to improve the least warmer ray to advance themselves, and they hold all they get. One of the earliest-looking plants in water is the golden saxifrage.

The last half of last month was cold and windy, — excepting the 19th, — wind northwest, west, and southwest. It at last ceased to be chilling the 29th and 30th, which were fine clear, cool, but windy days; on the 30th a slight haze; then the 31st was suddenly warm with a thick haze, thawing man and earth; and this succeeded by to-day's rain.

See, resting on the edge of the ice in Fair Haven Pond, a white duck with black head, and a dark one. They take to the water when I appear on the hill a quarter of a mile off, and soon fly down the river rather low over the water. Were they not the same with those of the 16th *ult.?*

April 2. Not only the grass but the pines also were greener yesterday for being wet. To-day, the grass being dry, the green blades are less conspicuous than yesterday. It would seem, then, that this color is more vivid when wet, and perhaps all green plants, like lichens, are to some extent greener in moist weather. Green is essentially *vivid*, or the color of life, and it is therefore most brilliant when a plant is moist or most alive. A plant is said to be green in opposition to being withered and dead. The word, according to

Webster, is from the Saxon *grene*, to grow, and hence is the color of herbage when growing.

High winds all night, rocking the house, opening doors, etc. To-day also. It is wintry cold also, and ice has formed nearly an inch thick in my boat.

P. M. — Down the river-bank.

The wind is still very strong and cold from the northwest, filling the air with dust and blowing the water, which has slightly risen, over the rocks and bushes along the shore, where it freezes in the shape of bulls' horns about the osiers, making coarse rakes with its dependent icicles when the osiers are horizontal, also turtle-shells over the rocks. It is just such a wind and freezing as that of last March (18th, I think), and, if the meadow were flooded, there would probably be as much ice as then on the bushes. There may be wind enough for this phenomenon in the winter, but then there is no open water to be blown.

April 3. It is somewhat warmer, but still windy, and —

P. M. — I go to sail down to the Island and up to Hubbard's Causeway.

Most would call it cold to-day. I paddle without gloves. It is a coolness like that of March 29th and 30th, pleasant to breathe, and, perhaps, like that, presaging decidedly warmer weather. It is an amelioration, as nature does nothing suddenly. The shores are lined with frozen spray-like foam, with an abrupt edge, a foot high often on the waterside. Occasionally where there [are] twigs there is a nest of those

short, thick bulls'-horn icicles, pointing in every direction. I see many hens feeding close to the river's edge, like the crows, — and robins and blackbirds later, — and I have no doubt they are attracted by a like cause. The ground being first thawed there, not only worms but other insect and vegetable life is accessible there sooner than elsewhere. See several pairs of ducks, mostly black.

Returning, when off the hill was attracted by the noise of crows, which betrayed to me a very large hawk (?), large enough for an eagle, sitting on a maple beneath them. Now and then they dived at him, and at last he sailed away low round the hill, as if hunting. The hillside was alive with sparrows, red-wings, and the first grackles [1] I have seen. I detected them first by their more rasping note, — or was that a crow blackbird? — after a short stuttering, then a fine, clear whistle.

April 4. A fine morning, still and bright, with smooth water and singing of song and tree sparrows and some blackbirds. A nuthatch is heard on the elms, and two ducks fly upward in the sun over the river.

P. M. — To Clematis Brook *via* Lee's.

A pleasant day, growing warmer; a slight haze. Now the hedges and apple trees are alive with fox-colored sparrows, all over the town, and their imperfect strains are occasionally heard. Their clear, fox-colored backs are very handsome. I get quite near to them. Stood quite near to what I called a hairy

[1] [That is, rusty grackles, or rusty blackbirds.]

woodpecker — but, seeing the downy afterward, I am in doubt about it. Its body certainly as big as a robin. It is a question of size between the two kinds. The rows of white spots near the end of the wings of the downy remind me of the lacings on the skirts of a soldier's coat. Talked with Daniel Garfield near the old house on Conantum. He was going to see if his boat was in order for fishing. Said he had been a-fishing as early as this and caught perch, etc., with a worm. He had often caught shiners in Fair Haven Pond through the ice in March, and once a trout in deep water off Baker's steep hill, which weighed two pounds, his lines having been left in over night. He had also often caught the little perch in White Pond in midwinter for bait. Sees trout and sucker running up brooks at this season and earlier, and thinks they go out of them in the fall, but not out of the river. Does not know where they go to.

I am surprised to [find] the pond, *i. e.* Fair Haven Pond, not yet fully open. There is [a] large mass of ice in the eastern bay, which will hardly melt to-morrow.[1]

It is a fine air, but more than tempered by the snow in the northwest. All the earth is bright; the very pines glisten, and the water is a bright blue. A gull is circling round Fair Haven Pond, seen white against the woods and hillsides, looking as if it would dive for a fish every moment, and occasionally resting on the ice. The water above Lee's Bridge is all alive with ducks. There are many flocks of eight or ten together,

[1] The rain of the 5th, P. M., must have finished it.

their black heads and white breasts seen above the water, — more of them than I have seen before this season, — and a gull with its whole body above the water, perhaps standing where it was shallow. Not only are the evergreens brighter, but the pools, as that upland one behind Lee's, the ice as well as snow about their edges being now completely melted, have a peculiarly warm and bright April look, as if ready to be inhabited by frogs.

I can now put a spade into the garden anywhere. The rain of April 1st and the warmth of to-day have taken out the frost there; but I cannot put a spade into banks by the meadow where there is the least slope to the north.

Returning from Mt. Misery, the pond and river-reach presented a fine, warm view. The slight haze, which on a warmer day at this season softens the rough surfaces which the winter has left and fills the copses seemingly with life, — makes them appear to teem with life, — made the landscape remarkably fair. It would not be called a warm, but a pleasant day; but the water has crept partly over the meadows, and the broad border of button-bushes, etc., etc., off Wheeler's cranberry meadow, low and nearly flat, though sloping regularly from an abrupt curving edge on the river-side several rods into the meadow till it is submerged — this is isolated, but at this distance and through this air it is remarkably soft and elysian. There is a remarkable variety in the view at present from this summit. The sun feels as warm as in June on my ear. Half a mile off in front is this elysian water, high over which

two wild ducks are winging their rapid flight eastward through the bright air; on each side and beyond, the earth is clad with a warm russet, more pleasing perhaps than green; and far beyond all, in the northwestern horizon, my eye rests on a range of snow-covered mountains, glistening in the sun.

April 5. Fast-Day. 9 A. M. —To Sudbury line by boat.

A still and rather warm morning, with a very thick haze concealing the sun and threatening to turn to rain.

It is a smooth, April-morning water, and many sportsmen are out in their boats. I see a pleasure-boat, on the smooth surface away by the Rock, resting lightly as a feather in the air.

Scare up a snipe close to the water's edge, and soon after a hen-hawk from the Clamshell oaks. The last looks larger on his perch than flying. The snipe too, then, like crows, robins, blackbirds, and hens, is found near the waterside, where is the first spring (*e. g.* alders and white maples, etc., etc)., and there too especially are heard the song and tree sparrows and pewees, and even the hen-hawk at this season haunts there for his prey. Inland, the groves are almost completely silent as yet. The concert of song and tree sparrows at willow-row is now very full, and their different notes are completely mingled. See a single white-bellied swallow dashing over the river. He, too, is attracted here by the early insects that begin to be seen over the water. It being Fast-Day, we on the water hear the loud and musical sound of bells

ringing for church in the surrounding towns. It is a sober, moist day, with a circle round the sun, which I can only see in the reflection in the water.

The river appears to have risen still last night, owing to the rain of the 1st, and many spring cranberries are washed together at last, and now many new seeds, apparently of sedges, are loosened and washed up. Now that for the most part it is melted quite to its edge, and there is no ice there, the water has a warmer, April look close under my eye. Now is the first time this year to get spring cranberries. In many places now the river wreck is chiefly composed of *Juncus militaris*. Was it so in fall?

There is a strong muskrat scent from many a shore. See a muskrat floating, which may have been drowned when the river was so high in midwinter, — for this is the second I have seen, — with the rabbit. I saw yesterday a yellow-spot and see to-day a painted tortoise, already out on the bank on a tuft of grass. The muskrat-hunter sits patiently with cocked gun, waiting for a muskrat to put out his head amid the button-bushes. He gets half a dozen in such a cruise. Bushed our boat with hemlock to get near some ducks, but another boat above, also bushed, scared them. Heard from one half-flooded meadow that low, general, hard, stuttering *tut tut tut* of frogs (?), — the awakening of the meadow.

Hear the cry of the peacock again.

By 4 P. M. it began to rain gently or mizzle. Saw this forenoon a great many of those little fuzzy gnats in the air.

April 6. It clears up at 8 P. M. warm and pleasant, leaving flitting clouds and a little wind, and I go up the Assabet in my boat. The blackbirds have now begun to frequent the water's edge in the meadow, the ice being sufficiently out. The April waters, smooth and commonly high, before many flowers (none yet) or any leafing, while the landscape is still russet and frogs are just awakening, is [*sic*] peculiar. It began yesterday. A very few white maple stamens stand out already loosely enough to blow in the wind, and some alder catkins look almost ready to shed pollen. On the hillsides I smell the dried leaves and hear a few flies buzzing over them. The banks of the river are alive with song sparrows and tree sparrows. They now sing in advance of vegetation, as the flowers will blossom, — those slight tinkling, twittering sounds called the singing of birds; they have come to enliven the bare twigs before the buds show any signs of starting. I see a large wood tortoise just crawled out upon the bank, with three oval, low, bug-like leeches on its sternum.

You can hear all day, from time to time in any part of the village, the sound of a gun fired at ducks. Yesterday I was wishing that I could find a dead duck floating on the water, as I had found muskrats and a hare, and now I see something bright and reflecting the light from the edge of the alders five or six rods off. Can it be a duck? I can hardly believe my eyes. I am near enough to see its green head and neck. I am delighted to find a perfect specimen of the *Mergus merganser*, or goosander, undoubtedly shot yesterday by the Fast-Day sportsmen, and I take a small flat-

tened shot from its wing, — flattened against the wing-bone, apparently. The wing is broken, and it is shot through the head.[1] It is a perfectly fresh and very beautiful bird, and as I raise it, I get sight of its long, slender vermilion bill (color of red sealing-wax) and its clean, bright-orange legs and feet, and then of its perfectly smooth and spotlessly pure white breast and belly, tinged with a faint salmon (or tinged with a delicate buff inclining to salmon).

This, according to Wilson, is one of the mergansers, or fisher ducks, of which there are nine or ten species and we have four in America. It is the largest of these four; feeds almost entirely on fin and shell fish; called water pheasant, sheldrake, fisherman diver, dun diver, sparkling fowl, harle, etc., as well as goosander. Go in April, return in November. Jardine has found seven trout in one female. Nuttall says they breed in the Russian Empire and are seen in Mississippi and Missouri in winter. He found a young brood in Pennsylvania. Yarrell says they are called also saw-bill and jack-saw; are sometimes sold in London market. Nest, according to Selby, on ground; according to others, in a hollow tree also. Found on the continent of Europe, northern Asia, and even in Japan (?). Some breed in the Orkneys and thereabouts.[2] My bird is 25⅞ inches long and 35 in alar extent; from point of wing to end of primaries, 11 inches.

[1] The chief wound was in a wing, which was broken. I afterward took three small shot from it, which were flattened against the bill's base and perhaps (?) the quills' shafts.

[2] *Vide* [p. 290].

It is a great diver and does not mind the cold. It appears admirably fitted for diving and swimming. Its body is flat, and its tail short, flat, compact, and wedge-shaped; its eyes peer out a slight slit or semicircle in the skin of the head; and its legs are flat and thin in one direction, and the toes shut up compactly so as to create the least friction when drawing them forward, but their broad webs spread them three and a half inches when they take a stroke. The web is extended three eighths of an inch beyond the inner toe of each foot.[1] There are very conspicuous black teeth-like serrations along the edges of its bill, and this also is roughened so that it may hold its prey securely.

The breast *appeared* quite dry when I raised it from the water.

The head and neck are, as Wilson says, black, glossed with green, but the lower part of the neck pure white, and these colors bound on each other so abruptly that one appears to be sewed on to the other.

It is a perfect wedge from the middle of its body to the end of its tail, and it is only three and a quarter inches deep from back to breast at the thickest part, while the greatest breadth horizontally (at the root of the legs) is five and a half inches. In these respects it reminds me of an otter, which however I have never seen.

I suspect that I have seen near a hundred of these birds this spring, but I never got so near one before. In Yarrell's plate the depth of the male goosander

[1] *Vide* the 9th of April.

is to its length (*i. e.* from tip of tail to most forward part of breast) as thirty-seven to one hundred and three, or the depth is more than one third. This length in Yarrell's bird, calling the distance from the point of the wing to the end of the primaries eleven inches, is about fourteen and a half inches, of which my three and a quarter is not one fourth. In Nuttall's plate the proportion is thirty-two to ninety-one, also more than one third. I think they have not represented the bird flat enough.

Yarrell says it is the largest of the British mergansers; is a winter visitor, though a few breed in the north of Britain; are rare in the southern counties. But, according to Yarrell, a Mr. Low in his Natural History of Orkney says they breed there, and, after breeding, the sexes separate; and Y. quotes Selby as saying that their nest is near the edge of the water, of grass, roots, etc., lined with down, sometimes among stones, in long grass, under bushes, or in a stump or hollow tree. Y. continues, egg "a uniform buff white," two and a half inches long. Sometimes carry their young on their backs in the water. It is common in Sweden and, according to the traveller Acerbi, in Lapland they give it a hollow tree to build in and then steal its eggs. The mother, he adds, carries her young to the water in her bill. Y. says it is well known in Russia and is found in Germany, Holland, France, Switzerland, Provence, and Italy. Has been seen near the Caucasus (and is found in Japan, according to one authority). Also in North America, Hudson's Bay, Greenland, and Iceland.

April 7. In my walk in the afternoon of to-day, I saw from Conantum, say fifty rods distant, two sheldrakes, male and probably female, sailing on A. Wheeler's cranberry meadow. I saw only the white of the male at first, but my glass revealed the female. The male is easily seen a great distance on the water, being a large white mark. But they will let you come only within some sixty rods ordinarily. I observed that they were uneasy at sight of me and began to sail away in different directions. I could plainly see the vermilion bill of the male and his orange legs when he flew (but he *appeared* all white above), and the reddish brown or sorrel of the neck of the female, and, when she lifted herself in the water, as it were preparatory to flight, her white breast and belly. She had a grayish look on the sides. Soon they approached each other again and seemed to be conferring, and then they rose and went off, at first low, down-stream, soon up-stream a hundred feet over the pond, the female leading, the male following close behind, the black at the end of his curved wings very conspicuous. I suspect that about all the conspicuous white ducks I see are goosanders.

I skinned my duck yesterday and stuffed it to-day. It is wonderful that a man, having undertaken such an enterprise, ever persevered in it to the end, and equally wonderful that he succeeded. To skin a bird, drawing backward, wrong side out, over the legs and wings down to the base of the mandibles! Who would expect to see a smooth feather again? This skin was very tender on the breast. I should have done better had I stuffed it at once or turned it back before the

skin became stiff. Look out not to cut the ear and eyelid.

But what a pot-bellied thing is a stuffed bird compared even with the fresh dead one I found! It looks no longer like an otter, like a swift diver, but a mere waddling duck. How perfectly the vent of a bird is covered! There is no mark externally.

At six this morn to Clamshell. The skunk-cabbage open yesterday, — the earliest flower this season. I suspect that the spathes do not push up in the spring. This is but three inches high. I see them as high and higher in the fall, and they seem only to acquire color now and gape open. I see but one out, and that sheds pollen abundantly.

See thirty or forty goldfinches in a dashing flock, in all respects (notes and all) like lesser redpolls, on the trees by Wood's Causeway and on the railroad-bank. There is a general twittering and an occasional mew. Then they alight on the ground to feed, along with *F. hyemalis* and fox-colored sparrows. They are merely olivaceous above, dark about the base of the bill, but bright lemon-yellow in a semicircle on the breast; black wings and tails, with white bar on wings and white vanes to tail. I never saw them here so early before; or probably one or two olivaceous birds I have seen and heard of other years were this.

Clear, but a cold air.

What is [the] cockroach(?)-like black beetle with

a colored edge (blue?) on pebbles, like cicindelas?

P. M. — To Hubbard's Close and Lee's Cliff.

A mouse-nest of grass, in Stow's meadow east of railroad, on the surface. Just like those seen in the rye-field some weeks ago, but this in lower ground has a distinct gallery running from it, and I think is the nest of the meadow mouse. The pool at Hubbard's Close, which was full of ice, unbroken gray ice, the 27th of March, is now warm-looking water, with the slime-covered callitriche standing a foot high in it; and already a narrow grass, the lake grass, has sprung up and lies bent nine or ten inches flat on the water. This is very early as well as sudden. In ten days there has been this change. How much had that grass grown under the ice? I see many small skaters (?) in it. Saw a trout as long as my finger, in the ditch dug from Brister's Spring, which, having no hole [or] overhanging bank where it could hide, plunged into the mud like a frog and was concealed. The female flowers of the hazel are just beginning to peep out.

At Lee's Cliff I find the radical leaves of the early saxifrage, columbine, and the tower mustard, etc., much eaten apparently by partridges and perhaps rabbits. They must have their greens in the spring, and earlier than we. Below the rocks, the most obviously forward radical leaves are the columbine, tower mustard (lanceolate and petioled and remotely toothed), and catnep, and mullein. Early crowfoot, the buttercup (*bulbosa*), is a peculiarly sappy, dark pickle-green, decided spring, and none of your sapless evergreens. The little thyme-leaved arenaria, I believe it is, which is evergreen, and some other minute leaves, also,

already green the ground. The saxifrage on the rocks will apparently open in two days; it shows some white. The grass is now conspicuously green about open springs in dense tufts. The frozen sod, partly thawed in low grounds, sinks under me as I walk.

April 8. 6 A. M. — Up Assabet.

A fine clear morning. The ground white with frost, and all the meadows also, and a low mist curling over the smooth water now in the sunlight, which gives the water a silver-plated look. The frost covers the willows and alders and other trees on the sides of the river fifteen or twenty feet high. Quite a wintry sight. At first I can hardly distinguish white maple stamens from the frost spiculæ. I find some anthers effete and dark, and others still mealy with pollen. There are many in this condition. The crimson female stigmas also peeping forth. It evidently began to shed pollen yesterday. I find also at length a single catkin of the *Alnus incana*, with a few stamens near the peduncle discolored and shedding a little dust when shaken; so this must have begun yesterday, I think, but it is not so forward as the maple. Though I have looked widely, I have not found the alder out before.

I see some long cobweb lines covered with frost, hanging from tree to tree, six feet in one case, like the ropes which extend from mast to mast of a vessel. Very thin dark ice-crystals over shallowest water, showing the flat pyramids. Hear and see a pigeon woodpecker, something like *week-up week-up*. The robins now sing in full blast.

Also song sparrows and tree sparrows and *F. hyemalis* are heard in the yard. The fox-colored sparrow is also there. The tree sparrows have been very musical for several mornings, somewhat canary-like. As to which are the earliest flowers, it depends on the character of the season, and ground bare or not, meadows wet or dry, etc., etc., also on the variety of soils and localities within your reach. The columbine leaves in the clefts of Cliffs are one of the very earliest obvious growths. I noticed it the first of April. The radical leaves of the buttercup now at Lee's Cliff — a small flat dense circle — are a very different color from those evergreen leaves seen when the snow first goes off. They are emphatically a *green* green, as if a sort of green fire were kindled under them in the sod. The buds not only of lilacs, but white birches, etc., look swollen.

When taking the brain out of my duck yesterday, I perceived that the brain was the marrow of the head, and it is probably only a less sentient brain that runs down the backbone, — the spinal marrow.

Abiel Wheeler tried to plow in sandy soil yesterday, but could not go beyond a certain depth because of frost.

P. M. — Up Assabet to G. Barrett's meadow.

This forenoon it was still and the water smooth. Now there is a strong cool wind from the east. Am surprised to see a sound clam close to the shore at mouth of Dakin's Brook, in one foot of water. A school of small minnows. Already a turtle's track on sand close

to water. The great buff-edged butterfly flutters across the river. Afterward I see a small red one over the shore.

Though the river — excepting Fair Haven Pond before the 6th — has for a week been completely free of ice, and only a little thin crystalwise forms in the night in the shallowest parts, that thick ice of the winter (February) on the meadows, covered by pieces of meadow-crust, is in many places still nearly as thick as ever, now that ice is a rather rare sight and plowing is beginning. It is remarkable how long this frozen meadow-crust lying on it has preserved it. Where the piece of meadow is only three or four feet in diameter, its edges now project over the ice, so that the whole looks like a student's four-cornered cap, — or that which the President of Harvard wears. All that mass on B.'s meadow appears to have been taken from the upper part of the meadow near the road, about thirty rods off from where it now lies. In the ditches near which it was taken up I see the coarse yellow, reddened, and sometimes already green-tipped pads of the yellow lily, partly unrolled at the bottom of the warm water, the most of a spring growth, perhaps, in the water; also two or three good-sized buds of a healthy green.

Hear at a distance in the sprout-lands the croaks of frogs from some shallow pool. Saw six muskrats' bodies, just skinned, on the bank, — two large yellowish, fatty-looking masses of (I suppose) musk on each side the lower part of the abdomen. Every part of the animal now emits a very strong scent of musk. A foot which I brought home (together with a head)

scented me all over. The fore feet are small and *white* on the palm, while the hind ones are *black*. All the skin being stripped off except on the nose and feet, the fore feet look like hands clothed in gauntlets of fur.

This evening, about 9 P. M., I hear geese go over, now there in the south, now southeast, now east, now northeast, low over the village, but not seen. The first *I* have heard.

April 9. 5.15 A. M. — To Red Bridge just before sunrise.

Fine clear morning, but still cold enough for gloves. A slight frost, and mist as yesterday curling over the smooth water. I see half a dozen crows on an elm within a dozen rods of the muskrats' bodies, as if eying them. I see thus often crows very early in the morning near the houses, which soon after sunrise take their way across the river to the woods again. It is a regular thing with them.

Hear the hoarse rasping *chuck* or chatter of crow blackbirds and distinguish their long broad tails. Wilson says that the only note of the rusty grackle is a *chuck*, though he is told that at Hudson's Bay, at the breeding-time, they sing with a fine note.[1] Here they utter not only a *chuck*, but a *fine* shrill whistle. They cover the top of a tree now, and their concert is of this character: They all seem laboring together to get out a clear strain, as it were wetting their whistles

[1] [The only song they are known to possess is the whistle that Thoreau here describes.]

against their arrival at Hudson's Bay. They begin as it were by disgorging or spitting it out, like so much tow, from a full throat, and conclude with a clear, fine, shrill, ear-piercing whistle. Then away they go, all chattering together.

Hear a phœbe near the river. The golden willow is, methinks, a little livelier green and begins to peel a little, but I am not sure the bark is any smoother yet.

Heard a loud, long, dry, tremulous shriek which reminded me of a kingfisher, but which I found proceeded from a woodpecker which had just alighted on an elm; also its clear whistle or *chink* afterward. It is probably the hairy woodpecker, and I am not so certain I have seen it earlier this year. Wilson does not allow that the downy one makes exactly such a sound. Did I hear part of the note of a golden-crowned (?) wren this morning? It was undoubtedly a robin, the last part of his strain.

Some twenty minutes after sundown I hear the first *booming* of a snipe.

The forenoon was cloudy and in the afternoon it rained, but the sun set clear, lighting up the west with a yellow light, which there was no green grass to reflect, in which the frame of a new building is distinctly seen, while drops hang on every twig, and producing the first rainbow I have seen or heard of except one long ago in the morning. With April showers, methinks, come rainbows. Why are they so rare in the winter? Is the fact that the clouds are then of snow commonly, instead of rain, sufficient to account for it?

At sunset after the rain, the robins and song sparrows fill the air along the river with their song.

MacGillivray says that divers, mergansers, and cormorants actually fly under water, using their wings fully expanded. He had seen them pursuing sand eels along the shores of the Hebrides. Had seen the water-ouzel fly in like manner.

Several flocks of geese went over this morning also. Now, then, the main body are moving. Now first are they generally seen and heard.

April 10. Another fine clear morning with, as usual, a little frost.

6 A. M. — To river.

I see afar, more than one hundred rods distant, sailing on Hubbard's meadow, on the smooth water in the morning sun, conspicuous, two male sheldrakes and apparently one female. They glide along, a rod or two apart in shallow water, alternately passing one another and from time to time plunging their heads in the water, but the female (whom only the glass reveals) almost alone diving. I think I saw one male drive the other back. One male with the female kept nearly together, a rod or two ahead of the other.

Therien says James Baker sold his wood-lot south of Fair Haven Pond, about twenty-five acres, chiefly white pine, for one hundred and twenty dollars an acre, and that there was one hemlock whose top and branches alone yielded two and a half cords.[1]

The buds of the earliest gooseberry in garden now

[1] *Vide* next page.

first begin to show a little green on a close inspection.

P. M. — To Fair Haven Pond by boat.

A strong south wind and overcast. There is the slightest perceptible green on the hill now. No doubt in a rain it would be pretty obvious. Saw a tolerably fresh sucker floating. Have seen two halves two days before which looked very ancient, as if they had died in the winter. There are three or four small scallops in the dorsal fin. Another dead muskrat, equally old with the two others I have seen this spring, — as if they had died at the time of the great freshet in February.

At Lee's the early sedge; one only sheds pollen. The saxifrage there to-morrow; one flower is partly expanded.

I measured the hemlock mentioned on the last page [above]. The circumference at the butt, a foot from the ground, was $9\frac{10}{12}$ feet, at ten feet from the ground $8\frac{10}{12}$, at the small end, where it was cut off, $1\frac{1}{2}$ feet. Length, 40 feet. Its diameter diminished very regularly the first twenty-five feet.

As for the early sedge, who would think of looking for a flower of any kind in those dry tufts whose withered blades almost entirely conceal the springing green ones? I patiently examined one tuft after another, higher and higher up the rocky hill, till at last I found one little yellow spike low in the grass which shed its pollen on my finger. As for the saxifrage, when I had given it up for to-day, having, after a long search in the warmest clefts and recesses, found only three or four

buds which showed some white, I at length, on a still warmer shelf, found one flower partly expanded, and its common peduncle had shot up an inch. These few earliest flowers in these situations have the same sort of interest with the arctic flora, for they are remote and unobserved and often surrounded with snow, and most have not begun to think of flowers yet.

Early on the morning of the 8th I paddled up the Assabet looking for the first flowers of the white maple and alder. I held on to the low curving twigs of the maple where the stream ran swiftly, the round clusters of its bursting flower-buds spotting the sky above me, and on a close inspection found a few which (as I have said) must have blossomed the day before. I also paddled slowly along the riverside looking closely at the alder catkins and shaking the most loose, till at length I came to a bush which had been weighed down by the ice and whose stem curved downward, passing through the water, and on this was one looser and more yellowish catkin, which, as I have said, on a close examination showed some effete anthers near the peduncle.

The morning of the 6th, when I found the skunk-cabbage out, it was so cold I suffered from numbed fingers, having left my gloves behind. Since April came in, however, you have needed gloves only in the morning.

Under some high bare bank sloping to the south on the edge of a meadow, where many springs, issuing from the bank, melt the snow early, — there you find the first skunk-cabbage in bloom.

I see much yellow lily root afloat, which the musk-rats have dug up and nibbled.

April 11. Rained in the night. Awake to see the ground white with snow, and it is still snowing, the sleet driving from the north at an angle of certainly not more than thirty or thirty-five degrees with the horizon, as I judge by its course across the window-panes. By mid-afternoon the rain has so far prevailed that the ground is bare. As usual, this brings the tree sparrows and *F. hyemalis* into the yard again.

April 12. Still falls a little snow and rain this morning, though the ground is not whitened. I hear a purple finch, nevertheless, on an elm, steadily warbling and uttering a sharp chip from time to time.

P. M. — To Cliffs and Hubbard's Close.

Fair with drifting clouds, but cold and windy. At the spring brook I see some skunk-cabbage leaves already four or five inches high and partly unrolled. From the Cliff Hill the mountains are again thickly clad with snow, and, the wind being northwest, this coldness is accounted for. I hear it fell fourteen or fifteen inches deep in Vermont.

As I sit in a sheltered place on the Cliffs, I look over the pond with my glass, but see no living thing. Soon after, I saw a boat on Lee's meadow just inside the button-bushes on the west of the pond, about a mile distant, and, raising my glass, I saw one man paddling in the stern and another in white pantaloons standing up in the bow, ready to shoot. Presently I saw the

last raise his gun, take aim, and fire into the bushes, though I heard no sound from over the dashing waves, but merely saw the smoke as in a picture. There was a strong wind from the northwest, while I was looking southwest. The gunner then pointed out the course while his companion paddled and struck the game in the water with a paddle, and I distinctly saw him lift up a muskrat by the tail. In a few moments, very nearly the same actions were repeated, though this time I did not see the rat raised. Then, turning my glass down the stream, I saw, on the Miles meadow shore about half a mile distant, a man whom I knew emptying his boat of fat pine roots which he had got for spearing, while his dog was digging at a woodchuck's hole close by.

For a week past I have frequently seen the tracks of woodchucks in the sand.

Golden saxifrage out at Hubbard's Close, — one, at least, effete. It may have been the 10th.

The grass has within ten days shot up very perceptibly in shallow water and about springs. In the last place it forms dense moss-like tufts in some cases; also some warm southward banks are considerably greened, and some hollows where the ice has recently melted, but *generally* there is no *obvious* greening as yet. It is at most a mere radical greenness, which you must seek to find.

Cowslip will apparently open in two days at Hubbard's Close.[1]

[1] Not 16th, but apparently touched by frost, but probably some by Second Division. *Vide* 18th.

April 13. P. M. — To Second Division cowslips.

A fair day, but a cool wind still, from the snow-covered country in the northwest. It is, however, pleasant to sit in the sun in sheltered places.

The small croaking frogs are now *generally* heard in all those stagnant ponds or pools in woods floored with leaves, which are mainly dried up in the summer. At first, perhaps, you hear but one or two dry croaks, but, if you sit patiently, you may hear quite a concert of them at last, — *er-wah er-wah er-wah*, with a nasal twang and twist, — and see them dimpling the surface here and there by their movements. But if you approach the pond-side, they suddenly cease. We hear them at J. P. Brown's Pond, which is edged with ice still on the north. The water must be smooth and the weather pretty warm.

There is still some icy snow in hollows under the north sides of woods.

I see the feathers, apparently of a fox-colored sparrow, completely covering a stump, where some creature has devoured it. At a great ant-hill, the common half-red, half-black ants are stirring, apparently clearing out rubbish from their nest. Great quantities of odoriferous sweet-gale seed are collected with the scum at the outlet of Nut Meadow, for they float. The *Alnus incana* blossoms begin generally to show. The *serrulata* will undoubtedly blossom to-morrow in some places.[1]

The pine on the Marlborough road which I saw

[1] Or probably not till 15th? Did I not take the *incana* for this in '54?

from my window has been sawed down the past winter. I try to count its circles; count sixty-one from centre to sap, but there the pitch conceals the rest completely. I guessed there were fifteen more, at least. The tree was probably quite eighty years old. It was about two and a quarter feet in diameter.

The common hazel just out. It is perhaps the prettiest flower of the *shrubs* that have opened. A little bunch of (in this case) half a dozen catkins, one and three quarters inches long, trembling in the wind, shedding golden pollen on the hand, and, close by, as many minute, but clear crystalline crimson stars at the end of a bare and seemingly dead twig. For two or three days in my walks, I had given the hazel catkins a fillip with my finger under their chins to see if they were in bloom, but in vain; but here, on the warm south side of a wood, I find one bunch fully out and completely relaxed. They know when to trust themselves to the weather. At the same time I hear through the wood the sharp peep of the first hylodes I have chanced to hear. Many cowslip buds show a little yellow, but they will not open there for two or three days. The road is paved with solid ice there.

Returning by the steep side-hill just south of Holden's wood-lot and some dozen or fourteen rods west of the open land, I saw, amid the rattlesnake-plantain leaves, what I suspect to be the *Polygala paucifolia*, — some very beautiful oval leaves of a dull green (green turned dark) above, but beneath — and a great many showed the under side — a clear and brilliant purple (or lake ? ?), growing and looking like checkerberry leaves, but more

flaccid. It is three or four inches high, with the oval and revolute leaves at top and a few remote small bract-like leaves on the (three-sided) stem. This polygala is sometimes called flowering wintergreen, and, indeed, it is not only an evergreen but somewhat pyrola-like to the eye.

See a sparrow without marks on throat or breast, running peculiarly in the dry grass in the open field beyond, and hear its song, and then see its white feathers in tail; the baywing.

A small willow by the roadside beyond William Wheeler's, to-morrow.

April 14. 6 A. M. — To Island.

An overcast and moist day, but truly April — no sun all day — like such as began methinks on Fast-Day, or the 5th. You cannot foretell how it will turn out. The river has been steadily rising since the first of April, though you would not think there had been rain enough to cause it. It now covers the meadows pretty respectably. It is perhaps because the warm rain has been melting the frost in the ground. This may be the great cause of the regular spring rise. I see half a dozen crow blackbirds uttering their coarse rasping *char char*, like great rusty springs, on the top of an elm by the riverside; and often at each *char* they open their great tails. They also attain to a clear whistle with some effort, but seem to have some difficulty in their throats yet.

The *Populus tremuloides* by the Island shed pollen — a very few catkins — yesterday at least; for some

anthers are effete and black this morning, though it [*sic*] is hardly curved down yet an is but an inch and a half long at most. White maples are now generally in bloom. The musk tortoise stirring on the bottom. Most of the stellaria has been winter-killed, but I find a few flowers on a protected and still green sprig, probably not blossomed long.

At 8 A. M. — Took caterpillars' eggs from the apple trees at the Texas house and found about thirty.

It being completely overcast, having rained a little, the robins, etc., sing at 4.30 as at sundown usually. The waters, too, are smooth and full of reflections.

April 15. 9 A. M. — To Atkins's boat-house.

No sun till setting. Another still, moist, overcast day, without sun, but all day a crescent of light, as if breaking away in the north. The waters smooth and full of reflections. A still cloudy day like this is perhaps the best to be on the water. To the clouds, perhaps, we owe both the stillness and the reflections, for the light is in great measure reflected from the water. Robins sing now at 10 A. M. as in the morning, and the phœbe; and pigeon woodpecker's cackle is heard, and many martins (with white-bellied swallows) are skimming and twittering above the water, perhaps catching the small fuzzy gnats with which the air is filled. The sound of church bells, at various distances, in Concord and the neighboring towns, sounds very sweet to us on the water this still day. It is the song of the villages heard with the song of the birds.

The Great Meadows are covered, except a small island in their midst, but not a duck do we see there. On a low limb of a maple on the edge of the river, thirty rods from the present shore, we saw a fish hawk eating a fish. Sixty rods off we could [see] his white crest. We landed, and got nearer by stealing through the woods. His legs looked long as he stood up on the limb with his back to us, and his body looked black against the sky and by contrast with the white of his head. There was a dark stripe on the side of the head. He had got the fish under his feet on the limb, and would bow his head, snatch a mouthful, and then look hastily over his right shoulder in our direction, then snatch another mouthful and look over his left shoulder. At length he launched off and flapped heavily away. We found at the bottom of the water beneath where he sat numerous fragments of the fish he had been eating, parts of the fins, entrails, gills, etc., and some was dropped on the bough. From one fin which I examined, I judged that it was either a sucker or a pout. There were small leeches adhering to it.

In the meanwhile, as we were stealing through the woods, we heard the pleasing note of the pine warbler, bringing back warmer weather, and we heard one honk of a goose, and, looking up, saw a large narrow harrow of them steering northeast. Half a mile further we saw another fish hawk, upon a dead limb midway up a swamp white oak over the water, at the end of a small island. We paddled directly toward him till within thirty rods. A crow came scolding to the tree and lit within three feet, looking about as large, compared

with the hawk, as a crow blackbird to a crow, but he paid no attention to him. We had a very good view of him, as he sat sidewise to us, and of his eagle-shaped head and beak. The white feathers of his head, which were erected somewhat, made him look like a copple-crowned hen. When he launched off, he uttered a clear whistling note, — *phe phe, phe phe, phe phe,* — *somewhat* like that of a telltale, but more round and less shrill and rapid, and another, perhaps his mate, fifty rods off, joined him. They flew heavily, as we looked at them from behind, more like a blue heron and bittern than I was aware of, their long wings undulating slowly to the tip, like the heron's, and the bodies seeming sharp like a gull's and unlike a hawk's.

In the water beneath where he was perched, we found many fragments of a pout, — bits of red gills, entrails, fins, and some of the long flexible black feelers, — scattered for four or five feet. This pout appeared to have been quite fresh, and was probably caught alive. We afterward started one of them from an oak over the water a mile beyond, just above the boat-house, and he skimmed off very low over the water, several times striking it with a loud sound heard plainly sixty rods off at least; and we followed him with our eyes till we could only see faintly his undulating wings against the sky in the western horizon. You could probably tell if any were about by looking for fragments of fish under the trees on which they would perch.

We had scared up but few ducks — some apparently black, which quacked — and some small rolling-pins, probably teal.

Returning, we had a fine view of a blue heron, standing erect and open to view on a meadow island, by the great swamp south of the bridge, looking as broad as a boy on the side, and then some sheldrakes sailing in the smooth water beyond. These soon sailed behind points of meadow. The heron flew away, and one male sheldrake flew past us low over the water, reconnoitring, large and brilliant black and white. When the heron takes to flight, what a change in size and appearance! It is *presto change!* There go two great undulating wings pinned together, but the body and neck must have been left behind somewhere.

Before we rounded Ball's Hill, — the water now beautifully smooth, — at 2.30 P. M., we saw three gulls sailing on the glassy meadow at least half a mile off, by the oak peninsula, — the plainer because they were against the reflection of the hills. They looked larger than afterward close at hand, as if their whiteness was reflected and doubled. As we advanced into the Great Meadows, making the only ripples in their broad expanse, there being still not a ray of sunshine, only a subdued light through the thinner crescent in the north, the reflections of the maples, of Ponkawtasset and the poplar hill, and the whole township in the southwest, were as perfect as I ever saw. A wall which ran down to the water on the hillside, without any remarkable curve in it, was exaggerated by the reflection into the half of an ellipse. The meadow was expanded to a large lake, the shore-line being referred to the sides of the hills reflected in it. It was a scene worth many such voyages to see. It was remarkable

how much light those white gulls, and also a bleached post on a distant shore, absorbed and reflected through that sombre atmosphere, — conspicuous almost as candles in the night. When we got near to the gulls, they rose heavily and flapped away, answering a more distant one, with a remarkable, deliberate, melancholy, squeaking scream, mewing, or piping, almost a squeal. It was a *little* like the loon. Is this sound the origin of the name sea-mew? Notwithstanding the smoothness of the water, we could not easily see black ducks against the reflection of the woods, but heard them rise at a distance before we saw them. The birds were still in the middle of the day, but began to sing again by 4.30 P. M., probably because of the clouds. Saw and heard a kingfisher — do they not come with the smooth waters of April? — hurrying over the meadow as if on urgent business.

That general *tut tut tut tut*, or snoring, of frogs on the shallow meadow heard first slightly the 5th. There is a very faint *er er er* now and then mixed with it.

April 16. 5 A. M. — To Hill.

Clear and cool. A frost whitens the ground; yet a mist hangs over the village. There is a thin ice, reaching a foot from the water's edge, which the earliest rays will melt. I scare up several snipes feeding on the meadow's edge. It is remarkable how they conceal themselves when they alight on a bare spit of the meadow. I look with my glass to where one alighted four rods off, and at length detect its head rising amid the

cranberry vines and withered grass blades, — which last it closely resembles in color, — with its eye steadily fixed on me. The robins, etc., blackbirds, song sparrows sing now on all hands just before sunrise, perhaps quite as generally as at any season. Going up the hill, I examined the tree-tops for hawks. What is that little hawk about as big as a turtle dove on the top of one of the white oaks on top of the hill? It appears to have a reddish breast. Now it flies to the bare top of a dead tree. Now some crows join, and it pursues one, diving at it repeatedly from above, down a rod or more, as far as I can see toward the hemlocks. Returning that way, I came unexpectedly close to this hawk perched near the top of a large aspen by the river right over my head. He seemed neither to see nor hear me. At first I thought it a new woodpecker. I had a fair view of all its back and tail within forty feet with my glass. Its back was, I should say, a rather dark ash, spotted, and so barred, wings and back, with large white spots, woodpecker-like (not well described in books), probably on the inner vanes of the feathers, both secondaries and primaries, and probably coverts. The tail conspicuously barred with black, three times beyond the covering and feathers and once at least under them. Beneath and under tail, mainly a dirty white with long and conspicuous femoral feathers, unlike sparrow hawk. Head darker and bill dark. It was busily pruning itself, and suddenly pitched off downward. What I call a pigeon hawk.[1] In the meanwhile heard the quivet through the wood, and,

[1] Probably sharp-shinned. *Vide* May 4th.

looking, saw through an opening a small compact flock of pigeons flying low about.

From the Hill-top looked to the Great Meadows with glass. They were very smooth, with a slight mist over them, but I could see very clearly the pale salmon of the eastern horizon reflected there and contrasting with an intermediate streak of skim-milk blue, — now, just after sunrise.

P. M. — To Flint's Pond.

A perfectly clear and very warm day, a little warmer than the 31st of March or any yet, and I have not got far before, for the first time, I regret that I wore my greatcoat. Noticed the first wasp, and many cicindelæ on a sandy place. Have probably seen the latter before in the air, but this warmth brings them out in numbers. The gray of Hubbard's oaks looks drier and more like summer, and it is now drier walking, the frost in most places wholly out. I got so near a grass-bird as to see the narrow circle of white round the eye. The spots on the *Emys guttata*, in a still, warm leafy-paved ditch which dries up, are exceedingly bright now. Does it last? At Callitriche Pool (I see no flowers on it), I see what looks like minnows an inch long, with a remarkably forked tail-fin; probably larvæ of dragon-flies. The eyed head conspicuous, and something like a large dorsal fin. They dart about in this warm pool and rest at different angles with the horizon. The water ranunculus was very forward here. This pool dries up in summer. The very pools, the receptacles of all kinds of rubbish, now, soon after

the ice has melted, so transparent and of glassy smoothness and full of animal and vegetable life, are interesting and beautiful objects. Stow's cold pond-hole is still full of ice though partly submerged, — the only pool in this state that I see. The orange-copper vanessa, middle-sized, is out, and a great many of the large buff-edged are fluttering over the leaves in wood-paths this warm afternoon. I am obliged to carry my great-coat on my arm. A striped snake rustles down a dry open hillside where the withered grass is long.

I could not dig to the nest of the deer mouse in Britton's Hollow, because of the frost about six inches beneath the surface. (Yet, though I have seen no plowing in fields, the surveyors plowed in the road on the 14th.) As far as I dug, their galleries appeared at first to be lined with a sort of membrane, which I found was the bark or skin of roots of the right size, their galleries taking the place of the decayed wood. An oak stump.

At Flint's, sitting on the rock, we see a great many ducks, mostly sheldrakes, on the pond, which will hardly abide us within half a mile. With the glass I see by their reddish heads that all of one party — the main body — are females. You see little more than their heads at a distance and not much white but on their throats, perchance. When they fly, they look black and white, but not so large nor with that brilliant contrast of black and white which the male exhibits. In another direction is a male by himself, conspicuous, perhaps several. Anon alights near us a flock of golden-eyes — *surely*, with their great black (looking) heads and a white patch on the side; short

stumpy bills (after looking at the mergansers); much clear black, contrasting with much clear white. Their heads and bills look ludicrously short and parrot-like after the others. Our presence and a boat party on the pond at last drove nearly all the ducks into the deep easterly cove.

We stole down on them carefully through the woods, at last crawling on our bellies, with great patience, till at last we found ourselves within seven or eight rods — as I measured afterward — of the great body of them, and watched them for twenty or thirty minutes with the glass through a screen of cat-briar, alders, etc. There were twelve female sheldrakes close together, and, nearest us, within two rods of the shore, where it was very shallow, two or more constantly moving about within about the diameter of a rod and keeping watch while the rest were trying to sleep, — to catch a nap with their heads in their backs; but from time to time one would wake up enough to plume himself. It seemed as if they must have been broken of their sleep and were trying to make it up, having an arduous journey before them, for we had seen them all disturbed and on the wing within half an hour. They were headed various ways. Now and then they seemed to see or hear or smell us, and uttered a low note of alarm, something like the note of a tree-toad, but very faint, or perhaps a little more wiry and like that of pigeons, but the sleepers hardly lifted their heads for it. How fit that this note of alarm should be made to resemble the croaking of a frog and so not betray them to the gunners! They appeared to sink

about midway in the water, and their heads were all a rich reddish brown, their throats white. Now and then one of the watchmen would lift his head and turn his bill directly upward, showing his white throat.

There were some black or dusky ducks in company with them at first, apparently about as large as they, but more alarmed. Their throats looked straw-colored, somewhat like a bittern's, and I saw their shovel bills. These soon sailed further off.

At last we arose and rushed to the shore within three rods of them, and they rose up with a din, — twenty-six mergansers (I think all females), ten black ducks, — and five golden-eyes from a little further off, also another still more distant flock of one of these kinds. The black ducks alone uttered a sound, their usual hoarse *quack*. They all flew in loose array, but the three kinds in separate flocks. We were surprised to find ourselves looking on a company of birds devoted to slumber after the alarm and activity we had just witnessed.

Returning, at Goose Pond, which many water-bugs (gyrinus) were now dimpling, we scared up two black ducks. The shore was strewn with much fresh eel-grass and the fine, now short eriocaulon with its white roots, apparently all pulled up by them and drifted in.

The spearer's light to-night, and, after dark, the sound of geese honking all together very low over the houses and apparently about to settle on the Lee meadow.

Have not noticed fox-colored sparrows since April 13th.

I am startled sometimes these mornings to hear the sound of doves alighting on the roof just over my head; they come down so hard upon it, as if one had thrown a heavy stick on to it, and I wonder it does not injure their organizations. Their legs must be cushioned in their sockets to save them from the shock?

When we reached Britton's clearing on our return this afternoon, at sunset, the mountains, after this our warmest day as yet, had got a peculiar soft mantle of blue haze, pale blue as a blue heron, ushering in the long series of summer sunsets, and we were glad that we had stayed out so late and felt no need to go home now in a hurry.

April 17. 5 A. M. — Up Assabet.

Very little frost; a clear morning. The oars still cold to the hand at this hour. Did I not hear an *F. juncorum* at a distance?? [1] Saw some crow blackbirds inspecting that old nest of theirs. I believe I see a tree sparrow still, but I do not remember an *F. hyemalis* for two days.[2] Geese went over at noon, when warm and sunny.

P. M. — To Lee's Cliff.

I leave off my greatcoat, though the wind rises rather fresh before I return. It is worth the while to walk so free and light, having got off both boots and greatcoat. Great flocks of grackles and red-wings about the Swamp Bridge Brook willows, perching restlessly on an apple tree all at once, and then, with a sweeping

[1] Yes. [2] *Vide* 18th.

or curving flight, alighting on the ground. Many robins flit before me in flocks these days. I rarely find a nest (of the right species) near the river but it has a piece of a fish-line in it. The yellow-spot tortoises are very common now in the ditches, tumbling in and crawling off, and perhaps burying themselves at your approach. Many are outside. The second sallow catkin (or any willow) I have seen in blossom — there are three or four catkins on the twig partly open — I am about to clutch, but find already a bee curved close on each half-opened catkin, intoxicated with its early sweet, — one perhaps a honey-bee, — so intent on its sweets or pollen that they do not dream of flying. Various kinds of bees — some of the honey-bees — have little yellow masses of pollen (?) on their thighs; some seem to be taking [it] into their mouths. So quickly and surely does a bee find the earliest flower, as if he had slumbered all winter at the root of the plant. No matter what pains you take, probably — undoubtedly — an insect will have found the first flower before you.

Yesterday I saw several larger frogs out. Perhaps some were small bullfrogs. That warmth brought them out on to the bank, and they jumped in before me. The general stirring of frogs. To-day I see a *Rana palustris* — I think the first — and a middling-sized bullfrog, I think. I suspect that those first seen in Hubbard's Close were the little croakers.

I see by their droppings that many birds — perhaps robins — have lately roosted in that wine-glass apple scrub on Conantum, an excellent covert from the hawks,

and there are three old nests in it, though it is only six or eight feet in diameter. I also see where birds have roosted in a thick white pine in Lee's Wood. It is easy to detect their roosting-places now, because they are in flocks.

Saw a woodchuck. His deep reddish-brown rear, somewhat grizzled about, looked like a ripe fruit mellowed by winter. C. saw one some time ago. They have several holes under Lee's Cliff, where they have worn bare and smooth sandy paths under the eaves of the rock, and I suspect that they nibble the early leaves there. (The arabis is half exterminated by some creature.) They, or the partridges or rabbits, there and at Middle Conantum Cliff, make sad havoc with the earliest radical leaves and flowers which I am watching, and in the village I have to contend with the hens, who also love an early salad.

Sat at the wall corner to see an eagle's white head and tail against the red hillside, but in vain. The distant white pines over the Spanish Brook seem to flake into tiers; the whole tree looks like an open cone. A sudden warm day, like yesterday and this, takes off some birds and adds others. It is a crisis in their career. The fox-colored sparrows seem to be gone, and I suspect that *most* of the tree sparrows and *F. hyemalis*, at least, went yesterday. So the pleasanter weather seems not an unmixed benefit. The flowers of the common elm at Lee's are now loose and dangling, apparently well out a day or two in advance of Cheney's, but I see no pollen. Walking under the Cliff, I am struck by the already darker, healthier green of early

weeds there — *e. g.* the little thyme-flowering sandwort — before there is any green to speak of elsewhere.

Did I not see the yellow redpoll on an apple tree with some robins, by chance in the same place where I saw one last year? [1] Yet I see no chestnut on head, but bright-yellow breast and blackish further extremity.

The early aspen catkins are now some of them two and a half inches long and white, dangling in the breeze. The earliest gooseberry leaves are fairly unfolding now, and show some green at a little distance.

April 18. 6 A. M. — See and hear tree sparrows, and hear hyemalis still. Rained last evening and was very dark. Fair this morning and warm. White-bellied swallow's and martin's twitter now at 9 A. M.

P. M. — To Cliffs and Walden and Hubbard's Close.

The hillside and especially *low* bank-sides are now conspicuously green. Almost did without a fire this morning. Coming out, I find it very warm, warmer than yesterday or any day yet. It is a reminiscence of past summers. It is perfectly still and almost sultry, with wet-looking clouds hanging about, and from time to time hiding the sun. First weather of this kind. And as I sit on Fair Haven Hill-side, the sun actually burns my cheek; yet I left some fire in the house, not knowing behind a window how warm it was. The flooded meadows and river are smooth, and just enough in shadow for reflections. The rush sparrows tinkle now at 3 P. M. far over the bushes, and hylodes are

[1] Yes.

peeping in a distant pool. Robins are singing and peeping, and jays are screaming. I see one or two smokes in the horizon. I can still see the mountains slightly spotted with snow. The frost is out enough for plowing probably in most open ground.

When I reach the top of the hill, I see suddenly all the southern horizon (east or south from Bear Hill in Waltham to the river) full of a mist, like a dust, already concealing the Lincoln hills and producing distinct wreaths of vapor, the rest of the horizon being clear. Evidently a sea-turn, — a wind from over the sea, condensing the moisture in our warm atmosphere and putting another aspect on the face of things. All this I see and say long before I feel the change, while still sweltering on the rocks, for the heat was oppressive. Nature cannot abide this sudden heat, but calls for her fan. In ten minutes I hear a susurrus in the shrub oak leaves at a distance, and soon an agreeable fresh air washes these warm rocks, and some mist surrounds me.

A low blackberry on the rocks is now expanding its leaves just after the gooseberry. A little sallow, about two feet high and apparently intermediate between *tristis* and the next, with reddish anthers not yet burst, will bloom to-morrow in Well Meadow Path. The shad-bush flower-buds, beginning to expand, look like leaf-buds bursting now. Male sweet-gale. One cowslip fully expanded, but no pollen; probably is at Second Division.[1] Some are plowing. Am overtaken

[1] Some fully open May 4th, but no pollen till next morning in chamber ! !

by a sudden sun-shower, after which a rainbow. Elm (American) in tumbler and probably at Cliffs probably a day [or] two before Cheney's.

In the evening hear far and wide the ring of toads, and a thunder-shower with its lightning is seen and heard in the west.

April 19. 5 A. M. — Up Assabet.

Warm and still and somewhat cloudy. Am without greatcoat. The guns are firing and bells ringing. I hear a faint *honk* and, looking up, see going over the river, within fifty rods, thirty-two geese in the form of a hay-hook, only two in the hook, and they are at least six feet apart. Probably the whole line is twelve rods long. At least three hundred have passed over Concord, or rather within the breadth of a mile, this spring (perhaps twice as many); for I have seen or heard of a dozen flocks, and the two I counted had about thirty each. Many tortoises have their heads out. The river has fallen a little. Going up the Assabet, two or three tortoises roll down the steep bank with a rustle. One tumbles on its edge and rolls swiftly like a disk cast by a boy, with its back to me, from eight or ten feet into the water. I hear no concert of tree sparrows. Hear the *tull-lull* of myrtle-bird [1] in street, and the jingle of the chip-bird.

This forenoon, sit with open window.

Now plowing and planting will begin generally.

P. M. — To Walden.

[1] White-throated sparrow.

Some golden willows will now just peel fairly, though on this one the buds have not started. (Another sudden change in the wind to northeast and a freshness with some mist from the sea at 3.30 P. M.) These osiers to my eye have only a little more liquid green than a month ago. A shad frog on the dry grass. The wild red cherry will begin to leaf to-morrow.

From Heywood's Peak I thought I saw the head of a loon in the pond, thirty-five or forty rods distant. Bringing my glass to bear, it seemed sunk very low in the water, — all the neck concealed, — but I could not tell which end was the bill. At length I discovered that it was the whole body of a little duck, asleep with its head in its back, exactly in the middle of the pond. It had a moderate-sized black head and neck, a white breast, and *seemed* dark-brown above, with a white spot on the side of the head, not reaching to the outside, from base of mandibles, and another, perhaps, on the end of the wing, with some black there. It sat drifting round a little, but with ever its breast toward the wind, and from time to time it raised its head and looked round to see if it were safe. I think it was the smallest duck I ever saw. Floating buoyantly asleep on the middle of Walden Pond. Was it not a female of the buffle-headed or spirit duck? I believed the wings looked blacker when it flew, with some white beneath. It floated like a little casket, and at first I doubted a good while if it possessed life, until I saw it raise its head and look around. It had chosen a place for its nap exactly equidistant between the two shores there, and, with its breast to the wind, swung

round only as much as a vessel held by its anchors in the stream. At length the cars scared it.

Goodwin had caught twenty-five pouts and one shiner at the Walden meadow, but no perch.

Slippery elm in tumbler to-day; probably to-morrow at Cliffs.

A partridge drums.

April 20. Rains all day, taking out the frost and imprisoning me. You cannot set a post yet on account of frost.

April 21. 5 A. M. — To Cliffs.

Fair and still. There is a fog over the river, which shows at a distance more than near by. Not much. The frost conceals the green of the gooseberry leaves just expanding. The shallow puddles left by yesterday's rain in the fields are skimmed over.

Hear the first seringo. The duskyish crown is divided by a lighter line. Above it is ashy-brown and drab (?), a streak of lemon yellow over the eye; some brownish drab or bay making a spot on wings; white lines diverging from throat; reddish legs against sun; breast and sides dashed. It has not the note of Nuttall's Savannah, nor, methinks, the blackness of Wilson's. Is it the *passerina*, which Nuttall does not describe? [1]

[1] Yes. He calls it *F. savanarum* (p. 494); says they arrive about the middle of May "occasionally." "On these occasions they perch in sheltered trees in pairs, and sing in an agreeable voice somewhat like that of the Purple Finch, though less vigorously." Thinks they go

At Cliffs, I hear at a distance a wood thrush.[1] It affects us as a part of our unfallen selves. The *Populus grandidentata* there may open to-morrow. The frost saves my feet a wetting probably. As I sit on the Cliffs, the sound of the frost and frozen drops melting and falling on the leaves in the woods below sounds [*sic*] like a gentle but steady rain all the country over, while the sun shines clear above all.

Aunt Maria has put into my hands to-day for safe-keeping three letters from Peter Thoreau, dated Jersey (the first July 1st, 1801, the second April 22d, 1804, and the third April 11th, 1806) and directed to his niece "Miss Elizabeth Thoreau, Concord, Near Boston," etc.; also a "Vue de la Ville de St. Helier," etc., accompanying the first. She is not certain that any more were received from him.

The first is in answer to one from Elizabeth announcing the death of her father (my grandfather). He states that *his* mother died the 26th of June, 1801, — the day before he received E.'s letter, — though not till after he had heard from another source of the death of his brother, which was not communicated to his mother. "She was in the 79th year of her age, and retained her memory to the last. . . . She lived with my two sisters, who took the greatest care of her." He says that he had written to E.'s father about his oldest brother, who died about a year before, but had

north to breed. [It would be hard to describe the grasshopper sparrow's song more inaccurately.]

[1] [The singer must have been a hermit thrush. The date is conclusive.]

had no answer; had written that he left his children, two sons and a daughter, in a good way. "The eldest son and daughter are both married, and have children, the youngest is about eighteen. I am still a widower of four children. . . . I have but two left, Betsy and Peter, James and Nancy are both at rest." He adds that he sends a view "of our native town," etc.

The second of these letters is sent by Captain John Harvey of Boston, then at Guernsey. He says that on the 4th of February previous he sent her a copy [1] of the last letter he had written, which was in answer to her second, since he feared she had not received it. Says they are still at war with the French; that they received the day before a letter from her "Uncle and Aunt Le Cappelain of London." Complains of not receiving letters. "Your Aunts Betsy and Peter join with me," etc.

According to the third letter, he received an answer to that he sent by Captain Harvey, by Captain Touzel, and will forward this by the last, who is going *via* Newfoundland to Boston. "He expects to go to Boston every year." Several vessels from Jersey go there every year. His nephew had told him some time before that he "met a gentleman from Boston who told him he [saw or knew? (torn out)] [2] Thoreau & Hayse there," and he (Peter Thoreau) therefore thinks the children must have kept up the name of the firm. Says Captain Harvey was an old friend of his. "Your cousin John is a Lieutenant in the British service, he has been already a campaign on the continent, he

[1] Where is it? [2] [The brackets are Thoreau's.]

is very fond of it." "Your aunts Betsy and Peter join," etc.

Aunt Maria thinks the correspondence ceased at Peter's death, because he was the one who wrote English.[1]

P. M. — Sail to meadow near Carlisle Bridge.

A fine, clear, and pleasant day with a little west wind. Saw a painted turtle not two inches in diameter. This must be more than one year old. A female red-wing. I see yellow redpolls on the bushes near the water, — handsome birds, — but hear no note. Watched for some time a dozen black ducks on the meadow's edge in a retired place, some on land and some sailing. Fifty rods off and without the glass, they looked like crows feeding on the meadow's edge, with a scarcely perceptible tinge of brown. Examining the ground afterward, found that the whitish lichen thallus (which formed a crust, a sort of scurfy bald place, here and there in the meadow where the water had just risen) was loosened up and floating over the bare spaces mixed with a few downy feathers. I thought the flat meadow islets showed traces of having been probed by them. *All* the button-bushes, etc., etc., in and about the water are now swarming with those minute fuzzy gnats about an eighth of an inch long. The insect youth are on the wing. The whole shore resounds with their hum wherever we approach it, and they cover our boat and persons. They are in countless myriads the whole length of the river. A peep, peetweet,

[1] [Sanborn, pp. 2–4.]

on the shore. There is some gossamer on the willows. The river has risen considerably, owing to yesterday's rain, and new drift is brought down. The greater fullness of the Assabet is perceptible at the junction.

The New York *Tribune* said on the 19th, "The caterpillar-blossoms, and the slightest peeping of green leaves among the poplars and willows, and a tolerable springing of grass, are the only vegetable proofs yet to be seen." I should think they were just with our gooseberry.

April 22. 5.30 A. M. — To Assabet stone bridge.

Tree sparrows still. See a song sparrow getting its breakfast in the water on the meadow like a wader. Red maple yesterday, — an early one by further stone bridge. Balm-of-Gilead probably to-morrow. The black currant is just begun to expand leaf — probably yesterday elsewhere — a little earlier than the red. Though my hands are cold this morning I have not worn gloves for a few *mornings* past, — a week or ten days. The grass is now become rapidly green by the sides of the road, promising dandelions and buttercups.

P. M. — To Lee's Cliff.

Fair, but windy. Tree sparrows about with their buntingish head and faint chirp. The leaves of the skunk-cabbage, unfolding in the meadows, make more show than any green yet. The yellow willow catkins pushing out begin to give the trees a misty, downy appearance, dimming them. The bluish band

on the breast of the kingfisher leaves the pure white beneath in the form of a heart. The blossoms of the sweet-gale are now on fire over the brooks, contorted like caterpillars. The female flowers also out like the hazel, with more stigmas, — out at same time with the male. I first noticed my little mud turtles in the cellar out of their [*sic*], one of them, some eight days ago. I suspect those in the river begin to stir about that time? Antennaria probably yesterday, Skull-cap Meadow Ditch. Many yellow redpolls on the willows now. They jerk their tails constantly like phœbes, but I hear only a faint chip. Could that have been a female with them, with an ash head and merely a yellow spot on each side of body, white beneath (?), and forked tail?[1] Red-stemmed moss now. Goosanders, male and female. They rise and fly, the female leading. They afterward show that they can get out of sight about as well by diving as by flying. At a distance you see only the male, alternately diving and sailing, when the female may be all the while by his side. Getting over the wall under the middle Conantum Cliff, I heard a loud and piercingly sharp whistle of two notes, — *phe-phe*, like a peep somewhat. Could it have been a woodchuck? Heard afterward under Lee's Cliff a similar fainter one, which at one time *appeared* to come from a pigeon woodpecker. Cowbirds on an apple tree. Crowfoot on Cliff. Johnswort radical leaves have grown several inches and angelica shows.

Elder leaves have grown one and a half inches, and thimble-berry is forward under rocks. Meadow-

[1] Probably a myrtle-bird.

sweet in some places begins to open to-day; also barberry under Cliffs and a moss rose to-morrow. Say earliest gooseberry, then elder, raspberry, thimbleberry, and low blackberry (the last two under rocks), then wild red cherry, then black currant (yesterday), then meadow-sweet, and barberry under Cliff, to-day. A moss rose to-morrow and hazel under Cliffs to-morrow.

April 23. River higher than before since winter. Whole of Lee Meadow covered. Saw two pigeon woodpeckers approach and, I think, put their bills together and utter that *o-week, o-week*. The currant and second gooseberry are bursting into leaf.

P. M. — To Cedar Swamp *via* Assabet.

Warm and pretty still. Even the riversides are quiet at this hour (3 P. M.) as in summer; the birds are neither seen nor heard. The anthers of the larch are conspicuous, but I see no pollen. White cedar to-morrow.[1] See a frog hawk beating the bushes regularly. What a peculiarly formed wing! It should be called the kite. Its wings are very narrow and pointed, and its form in front is a remarkable curve, and its body is not heavy and buzzard-like. It occasionally hovers over some parts of the meadow or hedge and circles back over it, only rising enough from time to time to clear the trees and fences. Soon after I see hovering over Sam Barrett's, high sailing, a more buzzard-like brown hawk, black-barred beneath and on tail, with short, broad, ragged wings and perhaps a

[1] In house the 24th.

white mark on under side of wings. The chickens utter a note of alarm. Is it the broad-winged hawk (*Falco Pennsylvanicus*)? [1] But why should the other be called *F. fuscus?* I think this is called the partridge hawk. The books are very unsatisfactory on these two hawks. Apparently barn swallows over the river. And do I see bank swallows also?

C. says he has seen a yellow-legs.

I have seen also for some weeks occasionally a brown hawk with white rump, flying low, which I have thought the frog hawk in a different stage of plumage; but can it be at this season? and is it not the marsh hawk? Yet it is not so heavy nearly as the hen-hawk.[2]

April 24. P. M. — To Flint's Pond.

Warm and quite a thick haze. Cannot see distant hills, nor use my glass to advantage. The *Equisetum arvense* on the causeway sheds its green pollen, which looks like lint on the hand abundantly, and may have done so when I *first* saw it upon the 21st. Young caterpillars' nests are just hatched on the wild cherry. Some are an inch in diameter, others just come out. The little creatures have crawled at once to the extremity of the twigs and commenced at once on the green buds just about to burst, eating holes into them. They do not come forth till the buds are about to burst. I see on the pitch pines at Thrush Alley that golden-crested wren or the other, ashy-olive above and whitish beneath, with a white bar on wings, restlessly darting

[1] Probably not. *Vide* May 2d.

[2] Probably female hen-harrier [*i. e.* marsh hawk].

at insects like a flycatcher, — into the air after them. It is quite tame. A very neat bird, but does not sing now. I see a bee like a small bumble-bee go into a little hole under a leaf in the road, which apparently it has made, and come out again back foremost. That fine slaty-blue butterfly, bigger than the small red, in wood-paths. I see a cone-bearing willow in dry woods, which will begin to leaf to-morrow, and apparently to show cones. *Pyrus arbutifolia* will begin to leaf to-morrow. Its buds are red while those of the shad-bush are green. I can find no red cedar in bloom, but it will undoubtedly shed pollen to-morrow. It is on the point of it. I am not sure that the white cedar is any earlier. The sprigs of red cedar, now full of the buff-colored staminate flowers, like fruit, are very rich. The next day they shed an abundance of pollen in the house. It is a clear buff color, while that of the white cedar is very different, being a faint salmon. It would be very pleasant to make a collection of these powders, — like dry ground paints. They would be the right kind of chemicals to have. I see the black birch stumps, where they have cut by Flint's Pond the past winter, completely covered with a greasy-*looking* pinkish-colored cream, yet without any particular taste or smell, — what the sap has turned to. The *Salix alba* begins to leaf. Have not seen the *F. hyemalis* for a week.

April 25. A moist April morning. A small native willow leafing [1] and showing catkins to-day; also the

[1] Or say May 1st, if they are bracts.

black cherry in some places. The common wild rose to-morrow. Balm-of-Gilead will not shed pollen apparently for a day or more. Shepherd's-purse will bloom to-day, — the first I have noticed which has sprung from the ground this season, or of an age. Say lilac begins to leaf with common currant.

P. M. — To Beck Stow's.

Hear a faint cheep and at length detect the white-throated sparrow, the handsome and well-marked bird, the largest of the sparrows, with a yellow spot on each side of the front, hopping along under the rubbish left by the woodchopper. I afterward hear a faint *cheep* very rapidly repeated, making a faint sharp jingle, — no doubt by the same.[1] Many sparrows have a similar faint metallic *cheep*, — the tree sparrow and field sparrow, for instance. I first saw the white-throated sparrow at this date last year. Hear the peculiar *squeaking* notes of a pigeon woodpecker. Two black ducks circle around me three or four times, wishing to alight in the swamp, but finally go to the river meadows. I hear the whistling of their wings. Their bills point downward in flying.

The *Andromeda calyculata* is out in water, in the little swamp east of Beck Stow's, some perhaps yesterday; and C. says he saw many bluets yesterday, and also that he saw two *F. hyemalis* yesterday.

I have noticed three or four upper jaws of muskrats on the meadow lately, which, added to the dead bodies floating, make more than half a dozen perhaps drowned out last winter.

[1] Probably by field sparrows; this their common low note.

After sunset paddled up to the Hubbard Bath. The bushes ringing with the evening song of song sparrows and robins, and the evening sky reflected from the surface of the rippled water like the *lake* grass on pools. A spearers' fire seems three times as far off as it is.

April 26. A cloudy, still, damp, and at length drizzling day.

P. M. — To Bayberry and Black Ash Cellar.

Wheildon's arbor-vitæ well out, maybe for a week. The silvery abele, probably to-day or yesterday, but I do not see pollen. The blossoms of the red maple (some a yellowish green) are now most generally conspicuous and handsome scarlet crescents over the swamps. Going over Ponkawtasset, hear a golden-crested (?) wren, — the robin's note, etc., — in the tops of the high wood; see myrtle-birds and half a dozen pigeons. The *prate* of the last is much like the creaking of a tree. They lift their wings at the same moment as they sit. There are said to be many about now. See their warm-colored breasts. I see pigeon woodpeckers billing on an oak at a distance. Young apple leafing, say with the common rose, also some early large ones. Bayberry not started much. Fever-bush out apparently a day or two, between Black Birch Cellar and Easterbrook's. It shows plainly now, before the leaves have come out on bushes, twenty rods off. See and hear chewinks, — all their strains; the same date with last year, by accident. Many male and female white-throated sparrows feeding on the pasture with the song sparrow. The

male's white is buff in the female. A brown thrasher (?) seen at a little distance.[1]

We see and hear more birds than usual this mizzling and still day, and the robin sings with more vigor and promise than later in the season.

April 27. 5 A. M. — S. tristis Path around Cliffs.

Cold and windy, but fair. The earliest willow by railroad begins to leaf and is out of bloom. Few birds are heard this cold and windy morning. Hear a partridge drum before 6 A. M., also a golden-crested (?) wren. *Salix tristis*, probably to-day, the female more forward than the male. Heard a singular sort of screech, somewhat like a hawk, under the Cliff, and soon some pigeons flew out of a pine near me. The black and white creepers running over the trunks or main limbs of red maples and uttering their fainter oven-bird-like notes. The principal singer on this walk, both in wood and field away from town, is the field sparrow. I hear the sweet warble of a tree sparrow in the yard.

Cultivated cherry is beginning to leaf. The balm-of-Gilead catkins are well loosened and about three inches long, but I have seen only fertile ones. Say male the 25th, 26th, or 27th.

April 28. A second cold but fair day. Good fires are required to-day and yesterday.

P. M. — Sail to Ball's Hill.

The *chimney swallow*, with the white-bellied and barn swallows, over the river. The red maples, now

[1] Heard May 4th.

in bloom, are quite handsome at a distance over the flooded meadow beyond Peter's. The abundant wholesome gray of the trunks and stems beneath surmounted by the red or scarlet crescents. Are not they sheldrakes which I see at a distance on an islet in the meadow? The wind is strong from the northwest.

Landed at Ball's Hill to look for birds under the shelter of the hill in the sun. There were a great many myrtle-birds there, — they have been quite common for a week, — also yellow redpolls, and some song sparrows, tree sparrows, field sparrows, and one *F. hyemalis*. In a cold and windy day like this you can find more birds than in a serene one, because they are collected under the wooded hillsides in the sun. The myrtle-birds flitted before us in great numbers, yet quite tame, uttering commonly only a *chip*, but sometimes a short trill or *che che, che che, che che*. Do I hear the *tull-lull* in the afternoon? It is a bird of many colors, — slate, yellow, black, and white, — singularly spotted. Those little gnats of the 21st are still in the air in the sun under this hill, but elsewhere the cold strong wind has either drowned them or chilled them to death. I saw where they had taken refuge in a boat and covered its bottom with large black patches.

I noticed on the 26th (and also to-day) that since this last rise of the river, which reached its height the 23d, a great deal of the young flag, already six inches to a foot long, though I have hardly observed it growing yet, has washed up all along the shore, and as to-day I find a piece of flag-root with it gnawed by a musk-rat, I think that they have been feeding very exten-

sively on the white and tender part of the young blades. They, and not ducks, for it is about the bridges also as much as anywhere. I think that they desert the clams now for this vegetable food. In one place a dead muskrat scents the shore, probably another of those drowned out in the winter. Saw the little heaps of dirt where worms had come out by river.

April 29. This morning it snows, but the ground is not yet whitened. This will probably take the cold out of the air. Many chip-birds are feeding in the yard, and one bay-wing. The latter incessantly scratches like a hen, all the while looking about for foes. The bay on its wings is not obvious except when it opens them. The white circle about the eye is visible afar. Now it makes a business of pluming itself, doubling prettily upon itself, now touching the root of its tail, now thrusting its head under its wing, now between its wing and back above, and now between its legs and its belly; and now it drops flat on its breast and belly and spreads and shakes its wings, now stands up and repeatedly shakes its wings. It is either cleaning itself of dirt acquired in scratching and feeding, — for its feet are black with mud, — or it is oiling its feathers thus. It is rather better concealed by its color than the chip-bird with its chestnut crown and light breast. The chip-bird scratches but slightly and rarely; it finds what it wants on the surface, keeps its head down more steadily, not looking about. I see the bay-wing eat some worms.

For two or three days the *Salix alba*, with its catkins

(not yet open) and its young leaves, or bracts (?), has made quite a show, before any other *tree*, — a pyramid of tender yellowish green in the russet landscape.

The water now rapidly going down on the meadows, a bright-green grass is springing up.

P. M. — By boat to Lupine Hill.

It did not whiten the ground. Raw, overcast, and threatening rain. A few of the cones within reach on F. Monroe's larches shed pollen; say, then, yesterday. The crimson female flowers are now handsome but small.

That lake grass — or perhaps I should call it *purple* grass — is now apparently in perfection on the water. Long and slender blades (about an eighth of an inch wide and six to twelve inches long, the part exposed) lie close side by side straight and parallel on the surface, with a dimple at the point where they emerge. Some are a very rich purple, with apparently a bloom, and very suggestive of placidity. It is a true *bloom*, at any rate, — the first blush of the spring caught on these little standards elevated to the light. By the water they are left perfectly smooth and flat and straight, as well as parallel, and thus, by their mass, make the greater impression on the eye. It has a strong marshy, somewhat fishy, almost seaweed-like scent when plucked. Seen through a glass the surface is finely grooved.

The scrolls of the interrupted fern are already four or five inches high.

I see a woodchuck on the side of Lupine Hill, eight or ten rods off. He runs to within three feet of his hole; then stops, with his head up. His whole body makes

an angle of forty-five degrees as I look sideways at it. I see his shining black eyes and black snout and his little erect ears. He is of a light brown forward at this distance (hoary above, yellowish or sorrel beneath), gradually darkening backward to the end of the tail, which is dark-brown. The general aspect is grizzly, the ends of most of the hairs being white. The yellowish brown, or rather sorrel, of his throat and breast very like the sand of his burrow, over which it is slanted.[1] No glaring distinctions to catch the eye and betray him. As I advance, he crawls a foot nearer his hole, as if to make sure his retreat while he satisfies his curiosity. Tired of holding up his head, he lowers it at last, yet waits my further advance.

The snout of the little sternothærus is the most like a little black stick seen above the water of any of the smaller tortoises. I was almost perfectly deceived by it close at hand; but it moved.

Choke-cherry begins to leaf. Dandelions out yesterday, at least. Some young alders begin to leaf. *Viola ovata* will open to-morrow. Mountain-ash began to leaf, say yesterday. Makes a show with leaves alone before any tree.

Paddling slowly along, I see five or six snipes within four or five rods, feeding on the meadow just laid bare, or in the shallow and grassy water. This dark, damp, cold day they do not mind me. View them with my glass. How the ends of their wings curve upward! They do not thrust their bills clear down com-

[1] Four nails on fore feet and five behind. The hind feet are also longer. Are the first not hands partly?

monly, but wade and nibble at something amid the grass, apparently on the surface of the water. Sometimes it seems to be the grass itself, sometimes on the surface of the bare meadow. They are not now thrusting their bills deep in the mud. They have dark-ash or slate-colored breasts. At length they take a little alarm and rise with a sort of rippling whistle or peep, a little like a robin's peep, but faint and soft, and then alight within a dozen rods. I hear often at night a very different harsh squeak from them, and another squeak much like the nighthawk's, and also the booming.

April 30. Horse-chestnut begins to leaf, — one of them.

Another, more still, cloudy, almost drizzling day, in which, as the last three, I wear a greatcoat.

P. M. — To Lee's Cliff.

Privet begins to leaf. (*Viburnum nudum* and *Lentago* yesterday.)

I observed yesterday that the barn swallows confined themselves to one place, about fifteen rods in diameter, in Willow Bay, about the sharp rock. They kept circling about and flying up the stream (the wind easterly), about six inches above the water, — it was cloudy and almost raining, — yet I could not perceive any insects there. Those myriads of little fuzzy gnats mentioned on the 21st and 28th must afford an abundance of food to insectivorous birds. Many new birds should have arrived about the 21st. There were plenty of myrtle-birds and yellow redpolls where the gnats

Barn Swallows

mosey, but wade and nibble at something amid the grass, apparently on the surface of the water. Some [illegible] it seems to be the grass itself, sometimes on the surface of the bare meadow. They are not now thrusting their bills deep in the mud. They have dark-ash or slate-colored breasts. At length they take a little [illegible] and rise with a [illegible] of zipping whistle or peep, a little like a robin's peep, but faint and soft, and then alight within a dozen rods. I hear often at night a very different harsh squeak from them, and another squeak much like the nighthawk's, and also the booming.

April 30. Horse-chestnut begins to leaf, — one of these.

[illegible], [illegible], cloudy, almost drinking day, [illegible] I wear a [illegible].

P. M. — [illegible]

[illegible] begins to leaf. (*Viburnum nudum* and *Lonicera [illegible]*.)

I [illegible] that the barn swallows continued [illegible] to one place, about fifteen rods in diameter, in Willow Bay, about the sharp rock. They kept circling about and dying up the stream (the wind [illegible]), about six inches above the water, — it was cloudy and almost raining, — yet I could not perceive any insects there. Those myriads of little fuzzy gnats mentioned on the 21st and 28th must afford an abundance of food to insectivorous birds. Many new birds should have arrived about the 21st. There were plenty of myrtle-birds and yellow redpolls where the gnats

were. The swallows were confined to this space when I passed up, and were still there when I returned, an hour and a half later. I saw them nowhere else. They uttered only a slight twitter from time to time and when they turned out for each other on meeting. Getting their meal seemed to be made a social affair. Pray, how long will they continue to circle thus without resting?

The early willow by Hubbard's Bridge has not begun to leaf. This would make it a different species from that by railroad, which has.

Hear a short, rasping note, somewhat tweezer-bird-like, I think from a yellow redpoll. Yellow dor-bug.

I hear from far the scream of a hawk circling over the Holden woods and swamp. This accounts for those two men with guns just entering it. What a dry, shrill, angry scream! I see the bird with my glass resting upon the topmost plume of a tall white pine. Its back, reflecting the light, looks white in patches; and now it circles again. It is a red-tailed hawk. The tips of its wings are curved upward as it sails. How it scolds at the men beneath! I see its open bill. It must have a nest there. Hark! there goes a gun, and down it tumbles from a rod or two above the wood. So I thought, but was mistaken. In the meanwhile, I learn that there is a nest there, and the gunners killed one this morning, which I examined. They are now getting the young. Above it was brown, but not at all reddish-brown except about head. Above perhaps I should call it brown, and a dirty white beneath; wings above

thickly barred with darker, and also wings beneath. The tail of twelve reddish feathers, once black-barred near the end. The feet pale-yellow and very stout, with strong, sharp black claws. The head and neck were remarkably stout, and the beak short and curved from the base. Powerful neck and legs. The claws pricked me as I handled it. It measured one yard and three eighths plus from tip to tip, *i. e.* four feet and two inches.[1] Some ferruginous on the neck; ends of wings nearly black.

Columbine just out; one anther sheds. Also turritis will to-morrow apparently; many probably, if they had not been eaten. Crowfoot and saxifrage are now in prime at Lee's; they yellow and whiten the ground. I see a great many little piles of dirt made by the worms on Conantum pastures.

The woodchuck has not so much what I should call a musky scent, but exactly that peculiar rank scent which I perceive in a menagerie. The musky at length becomes the regular wild-beast scent.

Red-wing blackbirds now fly in large flocks, covering the tops of trees — willows, maples, apples, or oaks — like a black fruit, and keep up an incessant gurgling and whistling, — all for some purpose; what is it? White pines now show the effects of last year's drought in our yard and on the Cliffs, the needles faded and turning red to an alarming extent. I now see many *Juniperus repens* berries of a handsome light blue above, being still green beneath, with three hoary pouting lips. The Garfields had found a burrow of

[1] *Vide* forward. *More.*

young foxes. How old?[1] I see the black feathers of a blackbird by the Miles Swamp side, and this single bright-scarlet one shows that it belonged to a red-wing, which some hawk or quadruped devoured.

[1] Saw the old and tracks of young; thinks they may be one month old.

IX

MAY, 1855

(ÆT. 37)

May 1. Rained some in the night; cloudy in the forenoon; clears up in the afternoon.

P. M. — By boat with Sophia to Conantum, a maying.

The water has gone down very fast and the grass has sprung up. There is a strong, fresh marsh scent wafted from the meadows, much like the salt marshes. We sail with a smart wind from the northeast, yet it is warm enough. Horse-mint is seen springing up, and for two or three days at the bottom of the river and on shore. At Hill Shore the *Anemone nemoralis* to-morrow. See none wide open. The myrtle-bird is one of the commonest and tamest birds now. It catches insects like a pewee, darting off from its perch and returning to it, and sings something like *a-chill chill, chill chill, chill chill, a-twear, twill twill twee,* or it may be all *tw* — not loud; a little like the *F. hyemalis,* or more like pine warbler, — rapid, and more and more intense as it advances. There is an unaccountable sweetness as of flowers in the air, — a true May-day. Raw and drizzling in the morning. The grackle still. What various brilliant and evanescent colors on the surface of this agitated water, now, as we are crossing Willow Bay, looking toward the half-con-

cealed sun over the foam-spotted flood! It reminds me of the sea.

At Clamshell, the *Viola blanda*. I do not look for pollen. I find a clamshell five inches long (wanting one sixteenth) and more than two and a half inches broad and two inches thick. What that little dusky-colored lichen on the ground at Clamshell end ditch, with a sort of triangular green fruit? or marchantia? The maples of Potter's Swamp, seen now nearly half a mile off against the russet or reddish hillside, are a very dull scarlet, like Spanish brown, but one against a green pine wood is much brighter. *Thalictrum anemonoides* at Conant Cliff. Did not look for pollen.

Why have the white pines at a distance that silvery (dewy?) look around their edges or thin parts? Is it owing to the wind showing the under sides of the needles? Methinks you do not see it in the winter.

Went to Garfield's for the hawk of yesterday. It was nailed to the barn *in terrorem* and as a trophy. He gave it to me with an egg. He called it the female, and probably was right, it was so large. He tried in vain to shoot the male, which I saw circling about just out of gunshot and screaming, while he robbed the nest. He climbed the tree when I was there yesterday afternoon, the tallest white pine or other tree in its neighborhood, over a swamp, and found two young, which he thought not more than a fortnight old, — with only down, at least no feathers, — and one addled egg, also three or four white-bellied or deer mouse (*Mus leucopus*), a perch, and a sucker,[1]

[1] I think these must have been dead fish they found.

and a gray rabbit's skin. He had seen squirrels, etc., in other nests. These fishes were now stale. I found the remains of a partridge under the tree. The reason I did not see my hawks at Well Meadow last year was that he found and broke up their nest there, containing five eggs.

The hawk measures exactly 22½ inches in length and 4 feet 4½ inches in alar extent, and weighs 3¼ pounds. The ends of closed wings almost two inches short of end of tail. General color *above* of wings and back an olivaceous brown, thickly barred with waving lines of very dark brown, there being a much broader bar next to the tip of the secondaries and tertiaries; and the first five primaries are nearly black toward the ends. A little white appears, especially on the tertiaries. The wing-coverts and scapulars glossed with purple reflections. The twelve tail-feathers (which MacGillivray says is the number in all birds of prey, *i. e.* the *Falconinæ* and *Striginæ*) showing five and three quarters inches a clear brown red, or rather fox-color, above, with a narrow dark band within half an inch of the end, which is tipped with dirty white. A slight inclination to dusky bars near the end of one side feather. Lower tail-coverts for nearly an inch white, barred with fox-color. Head and neck a paler, inclining to ferruginous, brown. *Beneath*, breast and wing-linings brown and white, the feathers of first centred with large dark-brown hastate spots, and the wing-linings streaked with ferruginous. Wings white, barred with dusky. "Vent and femorals," as Nuttall says, "pale ochreous." Tail white, softened by the

superior color. I do not perceive that the abdomen is barred.

Bill very *blue* black, with a *short, stout* curved tip, — curving from the cere more than a quarter of a circle, extends not quite a quarter of an inch beyond the lower mandible, — and is proportionally stouter *at tip* than in any of *his Falconinæ*, judging from plates of heads; whole visible, including cere, $1\frac{1}{8}$ inches long, and 1 inch deep at base; cere yellowish-green.

Tarsus and toes very pale yellow; claws blue-black. As MacGillivray says of *Buteo*, claws flattened beneath, "that of the middle toe with an inner sharp edge." (He says, as I *gather*, that all the diurnal birds of prey of Great Britain, *i. e. Falconinæ*, have claws either flattened or concave beneath, except *Pandion*, the inner edge of the middle one being more or less sharp, but least so in *Circus*, or harrier.) Tarsus feathered in front one third the way down. The toes for length stand in this order, — the first (or hind), second, fourth, third, the first being the shortest; for stoutness thus, — one, two, three, four. Claws for stoutness follow the same order with the toes. Utmost spread of toes and claws $4\frac{1}{2}$ inches. A considerable web between third and fourth toes.[1] Toes with papillæ not rigid beneath.

The wing extends nearly two feet from the body, and is $10\frac{3}{4}$ inches wide; from flexure is $15\frac{3}{4}$ inches. When fully expanded it has a rounded outline and a

[1] In this respect *Circus* and *Falco* much the same; *Aquila* and *Pernis* and *Milvus* have several short webs; *Haliaëtus*, *Pandion*, and *Accipiter* are free.

ragged appearance owing to the separation of the first five or six primaries, as I noticed the male bird while resting. The first primary short; they stand, first and eighth, seventh, sixth, second, fifth, third, fourth. The fifth and third are about the same length, and the fourth only a quarter of an inch longer than the third. As in the *Buteo vulgaris* of MacGillivray, found in Europe and in our north, the four first primaries "abruptly cut out on the inner web;" the second, third, fourth, and fifth, but *not* the first and sixth, "slightly so on the outer." There are ten primaries and there are fourteen secondaries. (MacGillivray says the primaries of the *Falconinæ* are ten, the secondaries from thirteen to eighteen.) The wing, I see, naturally opens at the primaries.

This is evidently very closely allied to the *Buteo vulgaris*, but apparently the wings are not so long compared with the tail, and there is a difference in the comparative length and stoutness of the toes; the feet of this are not "*bright* yellow," and the upper mandible is much stouter and more recurved at tip, judging from his plate of the head and his description. It is recurved as much as his osprey's.

The ear looked like a large round hole in the side of the head behind the eye.

The egg is a very dirty brownish white, with brown spots about the smaller end, though one end is about as large as the other. It is larger than a hen's egg, — $2\frac{3}{8}$ inches by 2.

MacGillivray describes the *Buteo*, as "body full, broad and muscular anteriorly;" "wings long, broad,

rounded, the third or fourth quill longest, the first very short." Of *Haliaëtus* he says, "wings very long, broad, rounded, the fourth and fifth quills longest;" *Aquila*, like last, omitting the "very;" *Pandion*, "wings very long, comparatively narrow, rounded, with thirty quills, the third primary longest, the second nearly equal, the fourth not much shorter, the first longer than the fifth;" *Falco*, "wings very long, pointed, the second quill longest, the first almost as long; primaries ten;" *Accipiter*, "wings long, much rounded; primary quills ten, fourth and fifth longest, first very short;" *Pernis*, "wings very long, broad, rounded, the third quill longest, the first about the length of the sixth;" *Milvus*, "wings extremely long, broad, and pointed, the fourth quill longest . . . first much shorter;" *Circus*, "wings long, much rounded; primary quills ten, the fourth and third longest, the first about equal to the seventh." These the genera of Great Britain.

Says of *Buteo:* "In form and plumage they are very intimately allied to the eagles and sea-eagles, as well as in the form of the bill, which is, however, shorter and less deep towards the end, and of the feet, which differ, notwithstanding, in being proportionally less robust, and in having the claws smaller. . . . Usually fly low, and with less rapidity than the falcons and hawks; sail in circles, like the eagles and some other species, and prey on heavy-flying birds, small quadrupeds, reptiles, and even insects." He says the *Buteo vulgaris* "greatly resembles the golden eagle in his mode of flying," so that he has mistaken them for it at a distance; that he "rarely gives chase to a bird on wing."

Neither he, in this case, nor Wilson nor Nuttall, in the case of the red-tail, speaks of their feeding on fishes.

MacGillivray says the *Falconinæ* lay from two to five eggs, and their cries are "seldom heard except during the breeding season." "When the young have longitudinal spots on the breast, the old have them transverse."

I do not find much in MacGillivray about the breeding-season of the *Falconinæ*. He says the white-tailed sea eagle (*Haliaëtus albicilla*) begins to prepare a nest some time in March, and the kestrel near the end of March, and the young of the golden eagle "are fledged about the end of July." Nuttall says the white-headed eagle begins to lay early in February, that with *Falco peregrinus* incubation "commences in winter, or very early in the spring," and that the osprey begins to lay early in May. This is all to the purpose about the season of incubation of hawks and eagles.

Early in spring I occasionally see hen-hawks perched about river, and approach quite near them, but never at any other time.

This hawk's flesh had a very disagreeable rank scent, as I was cutting it up, though fresh, — cutting off the wings, etc., etc.

I found the feathers of a partridge under the tree where the nest was.

What I have called the frog hawk is probably the male hen-harrier, Nuttall's *Circus cyaneus*, which he says is the same with the European. MacGillivray

refers to *C. Americanus* (?) and says the question of identity is undecided, and the large brown bird with white rump is the female.[1]

(Probably my small brown hawk is the *Falco fuscus*, or sharp-shinned.)

MacGillivray says the harrier occasionally eats dead fish and also will catch a chicken, not a hen. *Sometimes* catches its prey in open flight. Will hunt on the same beat at the same hour, for many days, according to Jardine (MacGillivray says that the golden eagle "seeks for *live* prey at a small height over the surface"); sail in circles. "The male, after the first autumnal moult, acquires in a considerable degree the plumage of the adult." "The change of plumage is effected in the autumn of the year after it leaves the nest, and not in the same year." The female used to be regarded as a distinct species called the "Ring-tail. Country people name it Blue Kite, Blue Hawk, Ring-tail, Brown Kite, or Gled; and the Highlanders call it Breid-air-toin (rag-on-rump), on account of the white tail-coverts conspicuous in both sexes."

May 2. P. M. — By boat up Assabet.

Quince begins to leaf, and pear; perhaps some of last earlier. Aspen leaves of young trees — or twenty to twenty-five feet high — an inch long suddenly; say yesterday began; not till the 11th last year. Leafing, then, is differently affected by the season from flowering. The leafing is apparently comparatively earlier this year than the flowering. The young aspens

[1] *Vide* Wilson.

are the first of indigenous trees conspicuously leafed. Diervilla, say began to leaf with viburnums. *Amelanchier Botryapium* yesterday leafed. That small native willow now in flower, or say yesterday, just before leaf, — for the first seem to be bracts, — two to seven or eight feet high, very slender and curving. Apparently has three or four lanceolate toothed bracts at base of petioled catkin; male three quarters and female one inch long; scales black and silky-haired; ovary oblong-oval, stalked, downy, with a small yellowish gland not so long as its stalk. See leaf by and by. Saw many crow blackbirds day before yesterday. Vigorous look the little spots of triangular sedge (?) springing up on the river-banks, five or six inches high, yellowish below, glaucous and hoary atop, straight and rigid. Many clamshells have round brassy-colored spots as big as a fourpence. Found one opened by rats last winter, almost entirely the color of tarnished brass within. Open the Assabet spring. The anemone is well named, for see now the *nemorosa*, amid the fallen brush and leaves, trembling in the wind, so fragile. Hellebore seems a little later than the cabbage.

Was that a harrier seen at first skimming low then soaring and circling, with a broad whiteness on the wings beneath?

May 3. P. M. — To Assabet Bath.

Small pewee; *tchevet*, with a jerk of the head. Hardhack leafed two or maybe three days in one place. Early pyrus leafed yesterday or day before, if I have not named it. The skull of a horse, — not a mare,

for I did not see the two small canine teeth in the upper jaw, nor in the under, — six molars on each side, above and below, and six incisors to each jaw. I first observed the stillness of birds, etc., at noon, with the increasing warmth, on the 23d of April. Sitting on the bank near the stone-heaps, I see large suckers rise to catch insects, — sometimes leap. A butterfly one inch in alar extent, dark velvety brown with slate-colored tips, on dry leaves. On the north of Groton Turnpike beyond Abel Hosmer's, three distinct terraces to river; first annually overflowed, say twenty-five or thirty rods wide, second seven or eight feet higher and forty or sixty wide, third forty feet higher still. Sweet-fern opened apparently yesterday. *Vaccinium Pennsylvanicum* began to leaf yesterday. Young red maple leaf to-morrow; also some white birch, and perhaps sugar maple.

Humphrey Buttrick, one of eight who alone returned from Texas out of twenty-four, says he can find woodcock's eggs; now knows of several nests; has seen them setting with snow around them; and that Melvin has seen partridges' eggs some days ago. He has seen crows building this year. Found in a hen-hawk's nest once the legs of a cat. Has known of several goshawks' nests (or what he calls some kind of eagle; Garfield called it the Cape eagle); one in a shrub oak, with eggs. Last year his dog caught seven black ducks so far grown that he got sixty cents a pair for them; takes a pretty active dog to catch such. He frequently finds or hears of them. Knew of a nest this year. Also finds wood ducks' nests. Has very often seen par-

tridges drum close to him. Has watched one for an hour. They strike the body with their wings. He shot a white-headed eagle from Carlisle Bridge. It fell in the water, and his dog was glad to let it alone. He suggested that my fish hawks found pouts in holes made by ice.

May 4. A robin sings when I, in the house, cannot distinguish the earliest dawning from the full moonlight. His song first advertises me of the daybreak, when I thought it was night, as I lay looking out into the full moonlight. I heard a robin begin his strain, and yielded the point to him, believing that he was better acquainted with the springs of the day than I, — with the signs of day.

5 A. M. — To Hill.

Many red-wings and grackles feeding together on meadows. They still fly in flocks. Some dark-ash; are they female grackles? Hear a brown thrasher. Yellow lily pads are just beginning to show themselves on the surface, the first noticeable on the water. All kinds of young maples, and some limbs of large white, begin to leaf. Red maple blossoms begin to cover ground. Ostrya will leaf to-morrow. The second amelanchier, sweet-fern, and early thorn begin to leaf to-day. Small white-barked shrub (andromeda?) on Island Neck begins to leaf to-morrow.[1] I think I hear a warbling vireo.[2]

Birds. Still see three or four crows together, though some at least are building. Jays do not scream as

[1] Or say 7th, and then slow. [2] Certainly the 10th.

early. Chickadee, spring notes still. Partridges setting. Have noticed no ducks for some days. All the *black* blackbirds as plenty as ever, and in flocks. Have not noticed robins in flocks for two or three days. See no gulls, nor *F. hyemalis* [1] nor tree sparrows now. Red-tail hawk young fourteen days old. Snipes feeding in numbers on the 29th April. Yellow redpolls in numbers May 1st. Woodcocks setting. Purple finch sings steadily. Myrtle-birds numerous, and sing their *tea lee, tea lee* in morning. White-throated sparrows here, and numerous. No goldfinches for long time. The water is now generally off the meadows.

P. M. — To beeches.

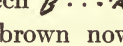
In cut woods a small thrush, with crown inclining to rufous, tail foxy, and edges of wings dark-ash; clear white beneath. I think the golden-crowned? See more white-throated sparrows than any other bird to-day in various parts of our walk, generally feeding in numbers on the ground in open dry fields and meadows next to woods, then flitting through the woods. Hear only that sharp, lisping *chip* (?) from them. A partridge's grayish tail-feather, with a subterminal dark band. Several larger thrushes on low limbs and on ground, with a dark eye (not the white around it of the wood thrush) and, I think, the nankeen spot on the secondaries. A hermit thrush?

Sitting in Abel Brooks's Hollow, see a small hawk go over high in the air, with a long tail and distinct from wings. It advanced by a sort of limping flight yet

[1] Think I saw one to-day.

rapidly, not circling nor tacking, but flapping briskly at intervals and then gliding straight ahead with rapidity, controlling itself with its tail. It seemed to be going a journey. Was it not the sharp-shinned, or *Falco fuscus?* I think that what I have called the sparrow hawk falsely, and latterly pigeon hawk, is also the sharp-shinned (*vide* April 26th and May 8th, 1854, and April 16th, 1855),[1] for the pigeon hawk's tail is white-barred.

Found a black snake's skeleton. Remarked the globular protuberance on which the vertebræ revolve, and the four (?) sharp, recurved teeth in the lower jaw.

Red cherry not *generally* leafing before yesterday. Sand cherry yesterday leafs. See where a skunk has probed last night, and large black dung with apparently large ants' heads and earth or sand and stubble or insects' wings in it; probably had been probing a large ants' hill. Was that a cerasus or prunus on Pine Hill, thus from wood-pile? AB two rods west. The beech  leaf-buds are very handsome reddish-brown now, some nearly an inch and a half long and very slender, not more than a sixth of an inch in diameter and regularly swelling from each end; will open, apparently, in three or four days. The blossom-buds are still larger; may bloom in eight days. Potentilla out.

What that plant in Baker's Pool, with sessile spatulate leaves toothed at end, now four or five inches high?

Noticed a perfectly regular circular concavity in

[1] And July, 1858.

a sandy soil in a hollow in birch woods, where apparently a partridge had dusted herself.

Yesterday a great many spotted and wood tortoises in the Sam Wheeler birch-fence meadow pool, which dries up. One of the former gradually settled itself into the sod by turning round and round and scratching with its claws.

A shower.

May 5. P. M. — To Beck Stow's.

Cold weather for several days. Canada plum and cultivated cherry and Missouri currant look as if they would bloom to-morrow. The sugar maples on the Common have just begun to show their stamens peeping out of the bud, but that by Dr. Barrett's has them an inch and a half long or more.

The trees and shrubs which I observe to make a show now with their green, without regard to the time when they began, are (to put them in the order of their intensity and generalness): —

Gooseberry, both kinds
Raspberry
Meadow-sweet
Choke-cherry *shoots*
Some young trembles
Very young apples
Red currant, and probably black
Pyrus, probably *arbutifolia*
Young black cherry
Thimble-berry
Probably wild red cherry in *some* places
Salix alba with bracts (?)
Some small native willows

Cultivated cherry
Some mountain-ash (*i. e.* European)
Some horse-chestnut

Excepting the *S. alba*, I am inclined to stop with the *Pyrus arbutifolia.*

The *Andromeda Polifolia* will apparently open about the 10th. High blueberry began to leaf in some places yesterday. Larch began to leaf, say when it opened, the 28th of April, but not noticeably till to-day. I find one bundle with needles a quarter of an inch long and spreading.

The small andromeda has lost its reddish leaves, probably about the time it blossomed, and I can neither get the red cathedral-window light looking toward the now westering sun in a most favorable position, nor the gray colors in the other direction, but it is all a grayish green. But the patches of cranberry in the swamp, seen at some distance toward the sun, are a beautiful crimson, which travels with you, keeping between you and the sun, like some rare plant in bloom there densely. I could not believe it was cranberry.

Looking over my book, I found I had done my errands, and said to myself I would find a crow's nest. (I had heard a crow scold at a passing hawk a quarter of an hour before.) I had hardly taken this resolution when, looking up, I saw a crow wending his way across an interval in the woods towards the highest pines in the swamp, on which he alighted. I directed my steps to them and was soon greeted with an angry *caw*, and, within five minutes from my resolve, I detected a new nest close to the top of the tallest white pine in the swamp.

A crow circled cawing about it within gunshot, then over me surveying, and, perching on an oak directly over my head within thirty-five feet, cawed angrily. But suddenly, as if having taken a new resolution, it flitted away, and was joined by its mate and two more, and they went off silently a quarter of a mile or more and lit in a pasture, as if they had nothing to concern them in the wood.

May 6. The young sugar maples leafing are more conspicuous now than any maples. Black oak buds are large and silvery. Peach leafed yesterday.

P. M. — To epigæa.

Salix alba opened yesterday. Gilead not leafing yet, but perhaps to-morrow? A robin's nest with two eggs, betrayed by peeping. On the 30th of April a phœbe flew out from under the arched bridge; probably building.

Saw again a slender vireo-like bird (seen yesterday, near R. Brown's); head somewhat crested behind; made me think of small pewee, — catches insects somewhat like it. *As I remember*, maybe ashy-white beneath, dusky-olive above, with two whitish bars on wings and dusky tail. Can it be the solitary vireo? *Equisetum sylvaticum*, probably yesterday or day before. Strawberry. That low sedge-like plant under Clamshell very common, with brownish, somewhat umbelled spikes, probably *Luzula campestris* (?), one of the wood rushes. *Viola lanceolata*, yesterday at least. High blackberry has begun to leaf; say two days. Hear near Second Division the *er er twe*,

ter ter twe, evergreen-forest note. Bright-yellow head and shoulders and beneath, and dark legs and bill-catching insects along base of pitch pine plumes, some, what creeper-like; very active and restless, darting from tree to tree; darted at and drove off a chickadee. I find I have thus described its colors last year at various times, *viz.:* black throat, this often with dark and light beneath; again, black streak from eyes, slate-colored back (?), forked tail, white beneath (?); another bird with yellow throat near by, perhaps female; again, June 17, black wings with white bars (?). Is it black-throated green, or Latham's yellow-fronted, or the golden-winged warbler? From Wilson I should think it the last, which he thinks the same with Pennant and Latham's yellow-front.

The small juncus at Second Division shows a field of dark green with reddish top, the flower just beginning to peep out; this the earliest plant of this kind to make a show; more than a foot high. Epigæa in full bloom.

Myrtle-birds very numerous just beyond Second Division. They sing like an instrument, *teee teee te, t t t, t t t*, on very various keys, *i. e.* high or low, sometimes beginning like *phe-be*. As I sat by roadside one drew near, perched within ten feet, and dived once or twice with a curve to catch the little black flies about my head, coming once within three feet, not minding me much. I could not tell at first what attracted it toward me. It saw them from twenty-five feet off. There was a little swarm of small flies, regularly fly-like with large shoulders, about my head. Many white-throated sparrows there.

Road full of cattle going up country.

Heard at a distance a ruby(?)-crowned wren, so robin-like and spirited. After saw one within ten or fifteen feet. Dark bill and legs, apparently dark olivaceous ashy head, a *little* whitish before and behind the full black eyes, ash breast, olive-yellow on primaries, with a white bar, dark tail and ends of wings, white belly and vent. Did not notice vermilion spot on hindhead. It darted off from apple tree for insects like a pewee, and returned to within ten feet of me as if curious. I think this the only *Regulus* I have ever seen.

Near Jenny Dugan's, perceive that unaccountable fugacious fragrance, as of all flowers, bursting forth in air, not near a meadow, which perhaps I first perceived on May 1st. It is the general fragrance of the year. I am almost afraid I shall trace it to some particular plant. It surpasses all particular fragrances. I am not sitting near any flower that I can perceive.

Two or three rods this side of John Hosmer's pitch pines, beyond Clamshell, some white *Viola ovata*, some with a faint bluish tinge.

A beautiful sunset, the sun behind a gilt-edged cloud, with a clear bright crimson space beneath.

May 7. 5 A. M. — To Island.

Finger-cold and windy. The sweet-flags showed themselves about in the pads. Hear Maryland yellow-throat. Many grackles still in flocks singing on trees, male and female, the latter a very dark or black ash, but with silvery eye. I suspect the red-wings are

building. Large white maples began to leaf yesterday at least, generally; one now shows considerably across the river. The aspen is earlier. *Viburnum dentatum* yesterday leafed. Bass to-morrow (some shoots sheltered now).

A crow's nest near the top of a pitch pine about twenty feet high, just completed, betrayed by the birds' cawing and alarm.[1] As on the 5th, *one* came and sat on a bare oak within forty feet, cawed, reconnoitred; and then both flew off to a distance, while I discovered and climbed to the nest within a dozen rods. One comes near to spy you first. It was about sixteen inches over, of the pitch pine dead twigs laid across the forks, and white oak leaves and bark fibres laid copiously on them; the cavity deep, and more than half covered and concealed with a roof of leaves; a long, sloping approach or declivity left on one side the nest.

Red currant out.

P. M. — To Lee's Cliff *via* Hubbard's Bath.

Viola cucullata apparently a day or two. A ladybug and humblebee, the last probably some time. A lily wholly above water, and yellow, in Skull-Cap Meadow, ready to open.[2] See *Rana fontinalis*.

Climbed to two crows' nests, — or maybe one of them a squirrel's, — in Hubbard's Grove. Do they not sometimes use a squirrel's nest for a foundation? A ruby-crested wren is apparently attracted and eyes me. It is wrenching and fatiguing, as well as dirty,

[1] A mistake.

[2] On the 12th I observed it sunk beneath the water.

work to climb a tall pine with nothing, or maybe only dead twigs and stubs, to hold by. You must proceed with great deliberation and see well where you put your hands and your feet. Saw probably a female *Falco fuscus* sail swift and low close by me and alight on a rail fence. It was a rich, very dark, perhaps reddish slate brown. I saw some white under the head; no white on rump. Wings thickly barred with dark beneath. It then flew and alighted on a maple. Did not fly so irregularly as the last one I called by this name. The early willow on the left beyond the bridge has begun to leaf, but by no means yet the one on the right. Scared up two gray squirrels in the Holden wood, which ran glibly up the tallest trees on the opposite side to me, and leaped across from the extremity of the branches to the next trees, and so on very fast ahead of me. Remembering — aye, aching with — my experience in climbing trees this afternoon and morning, I could not but admire their exploits. To see them travelling with so much swiftness and ease that road over which I climbed a few feet with such painful exertion!

A partridge flew up from within three or four feet of me with a loud whir, and betrayed one cream-colored egg in a little hollow amid the leaves. Hear the tweezer-bird. It looks like a bluish slate above, with a greenish(?)-yellow back and bright orange-yellow throat and breast, forked tail, two white bars on wings, whitish vent. Another, probably female, paler bluish, with fainter yellow and a conspicuous black crescent on breast. This is undoubtedly the parti-colored warbler,

i. e. Brewer's blue yellow-back (*Sylvia Americana* of Latham and Audubon, *pusilla* of Wilson). *Vide* June 18th, 1854 and May 9th, 1853. I believe the yellow-rumped warbler has a note somewhat like the tweezer's.

Climbed a hemlock to a very large and complete, probably gray squirrel's, nest, eighteen inches [in] diameter, — a foundation of twigs, on which a body of leaves and some bark fibres, lined with the last, and the whole covered with many fresh green hemlock twigs one foot or more long with the leaves on, — which had been gnawed off, — and many strewed the ground beneath, having fallen off. Entrance one side.

A short distance beyond this and the hawk's-nest pine, I observed a middling-sized red oak standing a little aslant on the side-hill over the swamp, with a pretty large hole in one side about fifteen feet from the ground, where apparently a limb on which a felled tree lodged had been cut some years before and so broke out a cavity. I thought that such a hole was too good a one not to be improved by some inhabitant of the wood. Perhaps the gray squirrels I had just seen had their nest there. Or was not the entrance big enough to admit a screech owl? So I thought I would tap on it and put my ear to the trunk and see if I could hear anything stirring within it, but I heard nothing. Then I concluded to look into it. So I shinned up, and when I reached up one hand to the hole to pull myself up by it, the thought passed through my mind perhaps something may take hold my fingers, but nothing did. The first limb was nearly opposite to the hole, and, resting on this, I looked in, and, to my great surprise,

there squatted, filling the hole, which was about six inches deep and five to six wide, a salmon-brown bird not so big as a partridge, seemingly asleep within three inches of the top and close to my face. It was a minute or two before I made it out to be an owl. It was a salmon-brown or fawn (?) above, the feathers shafted with small blackish-brown somewhat hastate (?) marks, *grayish* toward the ends of the wings and tail, as far as I could see. A large white circular space about or behind eye, banded in rear by a pretty broad (one third of an inch) and quite conspicuous perpendicular *dark*-brown stripe. Egret, say one and a quarter inches long, sharp, triangular, reddish-brown without mainly. It lay crowded in that small space, with its tail somewhat bent up and one side of its head turned up with one egret, and its large dark eye open only by a long slit about a sixteenth of an inch wide; visible breathing. After a little while I put in one hand and stroked it repeatedly, whereupon it reclined its head a little lower and closed its eye entirely. Though curious to know what was under it, I disturbed it no farther at that time.

In the meanwhile, the crows were making a great cawing amid and over the pine-tops beyond the swamp, and at intervals I heard the scream of a hawk, probably the surviving male hen-hawk, whom they were pestering (unless they had discovered the male screech owl), and a part of them came cawing about me. This was a very fit place for hawks and owls to dwell in, — the thick woods just over a white spruce swamp, in which the glaucous kalmia grows; the gray squirrels,

partridges, hawks, and owls, all together. It was probably these screech owls which I heard in moonlight nights hereabouts last fall. *Vide* end of this day.

Birch leafs to-day; probably some yesterday, with white maple. The Conantum thorn (cockspur?) leafs with earliest. That little red-stemmed (?) moss has now yellow-green oval fruit hanging densely in the sod. Sweet-briar shoots two inches long; this one of the earlier roses to leaf. Put it with early rose. The *Rubus triflorus* up two inches or more. Put it next after raspberry for present.

Polygonatum pubescens at Lee's, in three or four days. *Amelanchier Botryapium* on rocks, partly open; will probably shed pollen to-morrow. The long, narrow unfolded flower-buds, *rose-pink* without, are very pretty with the dark-*purplish* leaves, — prettier than the open ones, — like little cigarettes, to compare fair with foul. The dark-purple fruit-like fascicles of the staminate flowers of the ash on the rocks are now very remarkable, about the size of pignuts, and looking somewhat like them against the sky on the perfectly bare tree, or like dry alder scales or cones; will shed pollen in a day or two. Oftener one *pedicelled* anther and stamen than two together in the very minute calyx, — if it is one. Young bass from seed an inch high, the two leaves remarkably cut.

Returning by owl's nest, about one hour before sunset, I climbed up and looked in again. The owl was gone, but there were four nearly round *dirty brownish white*[1] eggs, quite warm, on nothing but the

[1] MacGillivray describes no eggs of this color, — only white, —

bits of rotten wood which made the bottom of the hole. The eggs were very nearly as large at one end as the other, slightly oblong, $1\frac{3}{8}$ inches by $1\frac{2}{8}$, as nearly as I could measure. I took out one. It would probably have hatched within a week, the young being considerably feathered and the bill remarkably developed. Perhaps she heard me coming, and so left the nest. My bird corresponds in color, as far as I saw it, with Wilson's *Strix asio*, but not his *nævia*, which Nuttall and others consider a young (?) bird, though the egg was not pure white. I do not remember that my bird was barred or *mottled* at all.[1]

Nuttall says, Little Screech-Owl: Greenland to Florida; chiefly prey on mice; also small birds, beetles, crickets, etc.; nest in May and June, and lined with etc., etc., eggs four to six; several bluebirds, blackbirds, and song sparrows in one. In cloudy weather come out earlier. Wilson's thrush attacked one. Note in autumn, "hō, hŏ hŏ hŏ hŏ hŏ, proceeding from high and clear to a low guttural shake or trill."

Was not that an owl's feather which I found half a mile beyond, downy more than half, and with base and separate white *points* beyond a dark band at the end?

Was not mine a bird of last year? But MacGillivray says of owls that the young differ very little from the old; "the older the individual becomes, the more simple is the colouring; the dark markings diminish

and the same with Nuttall, except the great gray owl. [Screech owl's eggs, *when clean*, are always white.]

[1] *Vide* the 12th.

in extent, and the finer mottlings are gradually obliterated." *Rhus Toxicodendron* under rocks leafs.

May 8. 5 A. M. — To Gilead.[1]

Still finger-cold. Think I saw bank swallows.[2]

At noon begins a cold, drizzling rain, which continues at intervals through the next day. A cold May storm, wind easterly. Grackle here still. Cultivated cherry opened flower yesterday. The rock maples (such sized as we *generally* have) come on faster and show more now than the red.

May 9. P. M. — To Annursnack.

The black currant will not bloom for five or six days. A *large* red maple just begun to leaf — its keys an inch and a half long — by Assabet Bridge. Castilleja show red, — *one*, — but will not bloom under a week probably. The same of erigeron. *Cornus alternifolia* and *paniculata* begin to leaf. Scared up three quails in the stubble in G. M. Barrett's orchard. They go off partridge-like from within two rods, with a sharp, whistling whir. Heard, methinks, a white-throated sparrow (?) sing very much like the beginning of a catbird's song. Could see no other bird. Thought it a catbird at first. See several of these sparrows yet.

May 10. Canada plum opens petals to-day and leafs. Domestic plum only leafs. Summer yellowbird.

P. M. — To Beeches.

[1] Began to leaf yesterday.

[2] Not at all certain.

Young red maples are *generally* later to leaf than young sugar maples; hardly began before yesterday; and large white are not so forward as young sugar. Muhlenberg's willow leafed four or five days. Young yellow birch leaf, say two days. In Callitriche Pool hear a bullfrog belch or dump. Is that a proserpinaca with finely divided leaves in this pool? Hear a tree-toad, — or, maybe, a woodpecker tapping. A juncus in Hubbard's Close two feet high and big as a crow's quill. Round-leafed cornel leaf to-morrow; also pignut leaf to-day in some places. The beech leaf-buds are more back[ward], apparently, than chestnut, but some leaves are expanding with the flower-buds, which are now opened so as to show the separate buds. *Vaccinium Pennsylvanicum*, early blueberry, in bloom; probably may shed pollen. A yellow redpoll still.

May 11. A. M. — To Island.

Only the lower limbs of bass begin to leaf yet, — yesterday. A crow blackbird's nest, about eight feet up a white maple over water, — a large, loose nest without, some eight inches high, between a small twig and main trunk, composed of coarse bark shreds and dried last year's grass, without mud; within deep and size of robin's nest; with four pale-green eggs, streaked and blotched with black and brown. Took one. Young bird not begun to form. Hear and see yellow-throat vireo. See oat-seed spawn — a mass as big as fist — on bottom; of brown jelly composed of smaller globules, each with a fish-like tadpole, color of a seed.

P. M. — To *Andromeda Polifolia.*

Some young elms begin to leaf. Butternut leafs apparently to-morrow. Larger rock maples not yet begun to leaf, — later considerably than large white maples, and somewhat than large red. Apparently andromeda will not open before the 15th or 16th, and the buck-bean, now just budded above the water, not before the 20th. *Juniperus repens* will not open, apparently, before the 14th or 15th. Canoe birch just sheds pollen. Very handsome drooping golden catkins, sometimes two or three together, some five and a quarter inches long. The leaves of some young sprouts already three-quarters inch over, but of the trees not started. The second amelanchier just sheds pollen, in a swamp.

I trod on a large black snake, which, as soon as I stepped again, went off swiftly down the hill toward the swamp, with head erect like a racer. Looking closely, I found another left behind, partly concealed by the dry leaves. They were lying amid the leaves in this open wood east of Beck Stow's, amid the sweet-fern and huckleberry bushes. The remaining one ran out its tongue at me, and vibrated its tail swiftly, making quite a noise on the leaves; then darted forward, passed round an oak, and *whipped* itself straight down into a hole at its base one and a half inches over. After its head had entered, its tail was not long in following.

You can hardly walk in a thick pine wood now, especially a swamp, but presently you will have a crow or two over your head, either silently flitting over, to spy what you would be at and if its nest is in danger,

or angrily cawing. It is most impressive when, looking for their nests, you first detect the presence of the bird by its shadow.

Was not that a bay-wing which I heard sing, — *ah, twar twe twar, twit twit twit twit, twe?* *Viola pedata* sheds pollen,[1] — the first I have chanced to see.

I hear some kind of owl partially hooting now at 4 P. M., I know not whether far off or near.

May 12. Cold enough for a fire this many a day.

6 A. M. — To Hill.

I hear the myrtle-bird's[2] *te-e-e, te-e-e, t t t, t t t,* clear flute-like whistle, and see eight or ten crow blackbirds together.

P. M. — To Lee's Cliff.

C. says he saw upland plover two or three nights ago. The sweet-gale begins to leaf. I perceive the fragrance of the *Salix alba*, now in bloom, more than an eighth of a mile distant. They now adorn the causeways with their yellow blossoms and resound with the hum of bumblebees, etc., etc. I have found half a dozen robins' nests with eggs already, — one in an elm, two in a *Salix alba*, one in a *Salix nigra*, one in a pitch pine, etc., etc. I find the partridge-nest of the 7th partially covered with dry oak leaves, and two more eggs only, three in all, cold. Probably the bird is killed.

As I approached the owl's nest, I saw her run past the hole up into that part of the hollow above it, and

[1] A *great many* out on the 13th.

[2] White-throat sparrow's.

probably she was there when I thought she had flown on the 7th. I looked in, and at first did not know what I saw. One of the three remaining eggs was hatched, and a little downy *white* young one, two or three times as long as an egg, lay helpless between the two remaining eggs. Also a dead white-bellied mouse (*Mus leucopus*) lay with them, its tail curled round one of the eggs. Wilson says of his red owl (*Strix asio*), — with which this apparently corresponds, and not with the mottled, though my egg is not "pure white," — that "the young are at first covered with a whitish down." *Heard* an oven-bird.

Passing on into the Miles meadow, was struck by the interesting tender green of the just springing foliage of the aspens, apples, cherries (more reddish), etc. It is now especially interesting while you can see through it, and also the tender yellowish-green grass shooting up in the bare river meadows and prevailing over the dark and sere.

Watched a black and white creeper from Bittern Cliff, a very neat and active bird, exploring the limbs on all sides and looking three or four ways almost at once for insects. Now and then it raises its head a *little*, opens its bill, and, without closing it, utters its faint *seeser seeser seeser*.

From beyond the orchard saw a large bird far over the Cliff Hill, which, with my glass, I soon made out to be a fish hawk advancing. Even at that distance, half a mile off, I distinguished its gull-like body, — pirate-like fishing body fit to dive, — and that its wings did not curve upward at the ends like a hen-hawk's

(at least I could not see that they did), but rather hung down. It came on steadily, bent on fishing, with long and *heavy* undulating wings, with an easy, sauntering flight, over the river to the pond, and hovered over Pleasant Meadow a long time, hovering from time to time in one spot, when more than a hundred feet high, then making a very short circle or two and hovering again, then sauntering off against the woodside. At length he reappeared, passed downward over the shrub oak plain and alighted on an oak (of course now bare), standing this time apparently lengthwise on the limb. Soon took to wing again and went to fishing down the stream a hundred feet high. When just below Bittern Cliff, I observed by its motions that it observed something. It made a broad circle of observation in its course, lowering itself somewhat; then, by one or two steep sidewise flights, it reached the water, and, as near as intervening trees would let me see, skimmed over it and endeavored to clutch its prey in passing. It failed the first time, but probably succeeded the second. Then it leisurely winged its way to a tall bare tree on the east end of the Cliffs, and there we left it apparently pluming itself. It had a very white belly, and indeed appeared all white beneath its body. I saw broad black lines between the white crown and throat.

The brown thrasher is a powerful singer; he is a quarter of a mile off across the river, when he sounded within fifteen rods. Hear the night-warbler.

Slippery elm leaf more forward than the common; say yesterday; only young common yet. White ash

begins to shed pollen at Lee's; yesterday, or possibly day before, but no leaves on the same. Hear the first creak of a cricket beneath the rocks there, so serene and composing. Methinks it surpasses the song of all birds; sings from everlasting to everlasting. Apparently a thousand little slender catchflies shooting up on the top of the cliff. The red oak there leafed a day or two, or one day earlier than hickory, and the black near it not yet. *Rhus radicans* leafed there a day or two. See one white-throat sparrow still.

The hearing of the cricket whets my eyes. I see one or two long lighter and smoother streaks across the rippled pond from west to east, which preserve their form remarkably, only are bent somewhat at last. The zephyr does not strike the surface from over the broad button-bush row till after a rod or so, leaving a perfectly smooth border, with a fine, irregular shaded edge where the rippling begins. I now begin to distinguish where at a distance the *Amelanchier Botryapium*, with its white against the russet, is waving in the wind.

Under Lee's Cliff, about one rod east of the ash, am surprised to find some pale-yellow columbines, — not a tinge of scarlet, — the leaves and stem also not purplish, but a yellowish and light green, with leaves differently shaped from the common, the parts, both flower and leaves, more slender, and the leaves not so flat, but inclining to fold. One flower of the *Polygonatum pubescens* open there; probably may shed pollen to-morrow.

Returning over Conantum, I directed my glass

toward the dead tree on Cliffs, and was surprised to see the fish hawk still sitting there, about an hour after he first alighted; and now I found that he was eating a fish, which he had under his feet on the limb and ate as I have already described. At this distance his whole head looked white with his breast.

Just before sundown, took our seats before the owl's nest and sat perfectly still and awaited her appearance. We sat about half an hour, and it was surprising what various distinct sounds we heard there deep in the wood, as if the aisles of the wood were so many ear-trumpets, — the cawing of crows, the peeping of hylas in the swamp and perhaps the croaking of a tree-toad, the oven-bird, the *yorrick* of Wilson's thrush, a distant stake-driver, the night-warbler and black and white creeper, the lowing of cows, the late supper horn, the voices of boys, the singing of girls, — not all together but separately, distinctly, and musically, from where the partridge and the red-tailed hawk and the screech owl sit on their nests.

May 13. P. M. — Down river and to Yellow Birch Swamp.

Yesterday was the first warm day for a week or two, and to-day it is much warmer still and hazy — as much like summer as it can be without the trees being generally leafed. I saw a *Fringilla hyemalis* this morning and heard the golden robin, now that the elms are beginning to leaf, also the myrtle-bird's *tealee*. The earliest gooseberry in garden has opened.

As we float down the river through the still and hazy

air, enjoying the June-like warmth, see the first kingbirds on the bare black willows with their broad white breasts and white-tipped tails; and the sound of the first bobolink was floated to us from over the meadows; now that the meadows are lit by the tender yellow green of the willows and the silvery-green fruit of the elms. I heard from a *female* red-wing that peculiar rich screwing warble — not *o gurgle ee* — made with *r*, not with *l*. The whole air too is filled with the ring of toads louder than heretofore. Some men are already fishing, indistinctly seen through the haze. Under the hop-hornbeam below the monument, observed a large pellet, apparently dropped by some bird of prey, consisting of mouse-hair, with an oat or two in it undigested, which probably the mouse had swallowed. This reminded me that I had read this kind of birds digested the flesh of the animals they swallowed, but not the vegetable food in the stomachs of the latter. The air is filled with the song of birds, — warbling vireo, gold robin, yellowbirds, and occasionally the bobolink. The gold robin, just come, is heard in all parts of the village. I see both male and female. It is a remarkable difference between this day and yesterday, that yesterday this and the bobolink were not heard and now the former, at least, is so musical and omnipresent. Even see boys a-bathing, though they must find it cold. I saw yesterday some of that common orange rust-like fungus already on a *Potentilla simplex* leaf. Hear the first catbird, more clear and tinkling than the thrasher. Left the boat below N. Barrett's and walked inland. Saw several handsome red-winged grass-

hoppers in different parts of our walk; but though we saw where they alighted, yet several times we could not find them in the grass for all that. The bayberry apparently will not open under a week. There are now a great many *Viola pedata*. The brook in Yellow Birch Swamp is very handsome now — broad and full, with the light-green hellebore eighteen inches high and the small two-leaved Solomon's-seal about it, in the open wood. Only a part of the yellow birches are leafing, but not yet generally the large ones. I notice no catkins. One white birch sheds pollen. The white birches on the side of Ponkawtasset are beginning to show faint streaks of yellowish green here and there.

A cooler and stronger wind from the east by mid-afternoon.

The large bass trees now begin to leaf.

Now, about two hours before sunset, the brown thrashers are particularly musical. One seems to be contending in song with another. The chewink's strain sounds quite humble in comparison.

At 9.30 P. M. I hear from our gate my night-warbler. Never heard it in the village before.

I doubt if we shall at any season hear more birds singing than now.[1]

Saw an amelanchier with downy leaf (apparently *oblongifolia*) on the southeast edge of Yellow Birch Swamp, about eighteen feet high and five or six inches in diameter, — a clump of them about as big as an apple tree.

[1] [This sentence is queried in the margin.]

May 14. Our peaches begin to bloom; others probably earlier. Domestic plums open; some *maybe* yesterday. Missouri currant open yesterday or day before. One apple on a roof open. The beech blossom in house opens; say to-morrow in woods, and probably will leaf generally by the next day. Second gooseberry in garden open. White ash begins to leaf; and waxwork. Clethra leafs. High blueberry open by Hubbard's Bath. Black scrub oak leafs, and chinquapin. Red choke-berry leafed, *say* two days later than black.

P. M. — To Cliffs *via* Hubbard's Bath.

See a male hen-harrier skimming low along the side of the river, often within a foot of the muddy shore, looking for frogs, with a very compact flock of small birds, probably swallows, in pursuit. Occasionally he alights and walks or hops flutteringly a foot or two over the ground. The Lombardy poplar and silvery white leafed at least two days ago. *Vaccinium vacillans* leafed, and perhaps flower opened, if that is one near West Fair Haven Spring. Some hickories, just opening their leaves, make quite a show with the red inner sides of the bud-scales turned back. All the oak leaves off the shrub oak plain, except apparently a few white oaks. Some gaylussacias leafed. Uva-ursi at Cliffs out some time, and some new shoots leafing.

Under the dead pine on which the fish hawk sat on the 12th *inst.*, a half-mile from the river, I find a few fish bones — one, I am pretty sure from comparison, the jaw of a pout. So that in three instances, the only ones observed this year, they were feeding on pouts. Probably the mice, etc., had picked up the rest of his

droppings. Thus these inhabitants of the interior get a taste of fish from time to time, — crumbs from the fish hawk's table.

Prinos verticillatus leafs.

May 15. P. M. — To Beck Stow's.

Suddenly very warm. Hear a hummingbird in the garden. Pear blossomed, — some perhaps yesterday. Locust, black and scarlet oak, and *some* buttonwoods leaf. A yellow butterfly. I hear from the top of a pitch pine in the swamp that loud, clear, familiar whistle which I have sometimes wrongly referred to the wood pewee, — *whip-ter-phe-ee*. Is it the whip-tom-kelly note which Soane and Wilson gave to the red-eye, but which Nuttall says he never heard from it? Sometimes *ter-phee-e*. This is repeated at considerable intervals, the bird sitting quite still a long time. I saw it dart out once, catch an insect, and return to its perch muscicapa-like.[1] As near as I could see it had a white throat, was whitish, streaked with dark, beneath, darker tail and wings, and maybe olivaceous shoulders; bright-yellow within bill.

Andromeda calyculata begins to leaf — separate twigs from blossoming ones. *Andromeda Polifolia* just open. Buck-bean, apparently in three days (in house the 18th).

The 13th, saw large water-bugs (*Gyrinus*) crawled up high on rocks. Watch a pine warbler on a pitch pine, slowly and faithfully searching it creeper-like. It encounters a black and white creeper on the same

[1] Probably *M. Cooperi*. *Vide* June 10th.

tree; they fly at each other, and the latter leaves, apparently driven off by the first. This warbler shuts its bill each time to produce its peculiar note. Rhodora will apparently open in two or three days. See and hear for a moment a small warbler-like bird in Nemopanthes Swamp which sings somewhat like *tchut a-worieter-worieter-worieter-woo.*

The greater part of the large sugar maples on the Common leaf. Large red maples generally are late to leaf.

Minott says that some years ago, maybe ten or fifteen, a man in Bedford climbed to an owl's nest (probably a cat owl's), and the owl took out one of his eyes and nearly killed him. He read it in the papers.

May 16. P. M. — Up Assabet.

Trees generally leafing. Black willow leafs. Bass leaf is an inch over; probably began about the 14th. Panicled andromeda leafed in some places, probably a day or two. Grape buds begin to open. Swamp white oak leaf, probably yesterday. Silky cornel leaf, two days or three. A woodcock, near river. A blue heron-like bird on a tree over river, but with uniformly fawn-colored throat and breast and *red* feet. We hear these last two or three warm days the loud sound of toads borne on or amid the rippling wind. A green bittern with its dark-green coat and crest, sitting watchful, goes off with a limping peetweet flight.

May 17. Waked up at 2.30 by the peep of robins, which were aroused by a fire at the pail-factory about

two miles west. I hear that the air was full of birds singing thereabouts. It rained gently at the same time, though not steadily.

May 18. P. M. — Boat to Nut Meadow.

Large devil's-needle. Sassafras well open. How long? Celtis will probably shed pollen to-morrow; shoots already an inch long. Sorrel pollen. First veery strain. Green-briar leafed several days. *Veronica serpyllifolia* well out (how long?) at Ash Bank Spring. Saw the yellow-legs feeding on shore.[1] Legs *not* bright-yellow. Goes off with the usual whistle; also utters a long monotonous call as it were [*sic*] standing on the shore, not so whistling. Am inclined to think it the lesser yellow-legs (though I think the only one we see). Yet its bill appears quite two inches long. Is it curved up? Observed a blackbird's (red-wing's) nest finished.[2] At Clamshell a bay-wing sparrow's nest, four eggs (young half hatched) — some *black*-spotted, others not.[3] These last warmer days a great many fishes dart away from close to the shore, where they seem to lie now more than ever. I see some darting about and rippling the water there with large back fins out, either pouts or suckers (not pickerel certainly). Apparently their breeding-season arrived. Is not this where the fish hawks get them? Rhodora; probably some yesterday. Black scrub oak pollen. Fir balsam pollen; say begins to leaf at same time. The clump of golden willows

[1] C. now thinks he has not seen it before.

[2] Four eggs in it on the 25th.

[3] Three young partly (slightly) fledged the 26th.

west of new stone bridge is very handsome now seen from hill, with its light-yellowish foliage, because the stems of the trees are seen through it.

May 19. Put my little turtles into the river. They had not noticeably increased in size, — or hardly. Three had died within a week for want of attention, — two mud turtles and one musk turtle. Two were missing, — one mud and one musk. Five musk were put into the river.

May 20. Rains a little.

May 21. P. M. — To Island.

Salix nigra leafs. Is that plump blue-backed, *rufous-rumped* swallow the cliff swallow, flying with barn swallows, etc., over the river? Nuttall apparently so describes it, — $5\frac{1}{2}$ by 12. It dashes within a foot of me. Lambkill leaf, a day or two. Choke-berry pollen; perhaps a day or more elsewhere. *Viola palmata* pretty common, apparently two or three days. *Some* button-bush begins to leaf. Cranberry well started; shoots three quarters of an inch. Bluets whiten the fields, and violets are now perhaps in prime.

Very cold to-day; cold weather, indeed, from the 20th to 23d inclusive. Sit by fires, and *sometimes* wear a greatcoat and expect frosts.

May 22. *Cerasus pumila* in full bloom. How long? Bank swallows — ashy-brown above — have holes at Deep Cut. Have not surely distinguished them before,

this season. Sage willow may have begun to leaf a week or ten days ago or more. Cuckoo. Scared up a nighthawk — from the white on wings — amid the dry leaves on the edge of a copse on Fair Haven Hill, where apparently it had been scratching, the leaves looking as if they had been turned up. *Linaria Canadensis* on Cliffs open. The deciduous trees leafing begin to clothe or invest the evergreens. The oaks are a *little* more than in the gray. Huckleberry open, possibly yesterday. Fringed polygala, how long? Herd's-grass (?) on Channing's bank, pollen.[1] Harris tells Emerson my cicada is the *Noveboracensis* (?), known to New-Yorkers. Lupine not open yet for two or three days. Not yet chinquapin oak.

May 23. A. M. — To bayberry *via* river.
Myrica, not quite. Lousewort pollen, how long?

May 24. A. M. — To Beck Stow's.

Buttonwood not open. Celandine pollen. Butternut pollen, apparently a day or two. Black oak pollen yesterday, at least. Scarlet oak the same, but a little later. The staminate flowers of the first are on long and handsome tassels for three or four inches along the extremities of last year's shoots, depending five inches (sometimes six) by four in width and quite dense and thick. The scarlet oak tassels are hardly half as long; the leaves, much greener and smoother and now somewhat wilted, emit a sweet odor, which those of the black do not. Both these oaks are appar-

[1] [See May 24, where this grass apparently is called foxtail grass.]

ently more forward at top, where I cannot see them. Mountain-ash open apparently yesterday. In woods by *Andromeda Polifolia* the chestnut-sided warbler, with clear yellow crown and yellow on wings and chestnut sides. It is exploring low trees and bushes, often along stems about young leaves, and frequently or after short pauses utters its somewhat summer-yellowbird-like note, say, *tchip tchip, chip chip* (quick), *tche tche ter tchéa,* — spray[ey] and rasping and faint. Another, further off.

Andromeda Polifolia now in prime, but the leaves are apt to be blackened and unsightly, and the flowers, though delicate, have a feeble and sickly look, rose-white, somewhat crystalline. Its shoots or new leaves, unfolding, say when it flowered or directly after, now one inch long. Buck-bean just fairly begun, though probably first the 18th; a handsome flower, but already when the raceme is only half blown, some of the lowest flowers are brown and withered, deforming it. What a pity! *Juniperus repens* pollen not even yet; apparently to-morrow. Apparently put back by the cold weather. Beach plum pollen probably several days in some places; and leaves begun as long.

Hear a rose-breasted grosbeak. At first thought it a tanager, but soon I perceived its more *clear* and instrumental — should say whistle, if one could whistle like a flute; a noble singer, reminding me also of a robin; clear, loud and flute-like; on the oaks, hillside south of Great Fields. Black all above except white on wing, with a triangular red mark on breast but, as I saw, all white beneath this. Female quite

different, yellowish olivaceous above, more like a muscicapa. Song not so sweet as clear and strong. Saw it fly off and catch an insect like a flycatcher.

An early thorn pollen (not *Crus-Galli*) apparently yesterday.

Picked up a pellet in the wood-path, of a small bird's feathers, one inch in diameter and loose; nothing else with them; some slate, some yellow. Young robins some time hatched. Heard a purple finch sing more than one minute without pause, loud and rich, on an elm over the street. Another singing very faintly on a neighboring elm.

Conant fever-bush had not begun to leaf the 12th. I seem to have seen, among sedges, etc., (1) the *Carex Pennsylvanica;* also (2) another similar, but later and larger, in low ground with many more pistillate flowers nearly a foot high, three-sided and rough culm (the first is smooth); also (3) an early sedge at Lee's Cliff with striped and pretty broad leaves not rigid, perhaps on 554th page of Gray; (4) the rigid tufted are common in meadows, with cut-grass-like leaves. Call it *C. stricta*, though not yet more than a foot high or eighteen inches.

Of *Juncaceæ*, perhaps *Luzula campestris*, the early umbelled purple-leaved, low.

And, apparently, of grasses, foxtail grass, on C.'s bank.

Naked azalea shoots more than a week old, and other leaves, say a week at least.

P. M. — To Cliffs.

Wind suddenly changed to south this forenoon, and for first time I think of a thin coat. It is very hazy in consequence of the sudden warmth after cold, and I cannot see the mountains. Chinquapin pollen. Lupine not yet. Black scrub oak tassels, some reddish, some yellowish. Just before six, see in the northwest the first summer clouds, methinks, piled in cumuli with silvery edges, and westward of them a dull, rainy-looking cloud advancing and shutting down to the horizon; later, lightning in west and south and a little rain. Another kind of frog spawn at Beck Stow's.

May 25. A rather warm night the last; window slightly open. Hear buzz of flies in the *sultryish* morning air on awaking.

8 A. M. — To Hill.

Late rose shoots, two inches, say a fortnight since. *Salix nigra* pollen, a day at least. Wood pewee. Apparently yellowbirds' nests just completed — one by stone bridge causeway,[1] another on birch by mud turtle meadow. *Veronica peregrina* in Mackay's strawberries, how long? Most of the robins' nests I have examined this year had three eggs, clear bluish green.

A chip-bird's nest on a balm-of-Gilead, eight feet high, between the main stem and a twig or two, with four very pale blue-green eggs with a sort of circle of brown-black spots about larger end.

Red-wing's nest with four eggs — white, very faintly tinged with (perhaps) green and curiously and neatly

[1] One egg in it the next morning. Also a red-wing's nest opposite Dodd's (one egg in it next morning, *i. e.* 26th).

marked with brown-black spots and lines on the large end. Red-wings now *generally* beginning to lay.

Fever-root one foot high and more, say a fortnight or three weeks. Scared a screech owl out of an apple tree on hill; flew swiftly off at first like a pigeon woodpecker and lit near by facing me; was instantly visited and spied at by a brown thrasher; then flew into a hole high in a hickory near by, the thrasher following close to the tree. It was reddish or ferruginous. Choke-cherry pollen on island, apparently two or three days. Hemlock pollen, probably to-morrow; some in house to-day; say to-day; not yet leafing. *Aralia nudicaulis*, *perhaps* two days pollen. *Cornus florida*, no bloom. Was there year before last? Does it not flower every other year? Its leaf, say, just after *C. sericea*. Tupelo leaf before button-bush; maybe a week now. Red oak pollen, say a day or two before black. Swamp white oak pollen.

River at summer level, four inches below long stone. Grass patches conspicuous, and flags and *Equisetum limosum* and pontederia (eight inches high), and white lily pads now (after yellow) red above, and purplish polygonum leaves in beds above water. For some days the handsome phalanxes of the *Equisetum limosum* have attracted me. The button-bush hardly yet *generally* begun to leaf. Critchicrotches in prime.

Heard the first regular bullfrog's trump on the 18th; none since.[1]

Juniper, plucked yesterday, sheds pollen in house to-day, and probably in field.

[1] One in the evening.

Is our white willow Gray's var. 2d, *cærulea?*

The golden robin keeps whistling something like *Eat it, Potter, eat it!*

Carex exilis (??), river-shore opposite Wheeler's gate, six inches high, but the culm smooth — some time.

Is that sweet-scented vernal grass just begun to bloom at celtis shore?

Fir balsam begun to leaf — with flower.

Cottony aphides on white pines. Hear a quail and the summer spray frog,[1] amid the ring of toads.

May 26. 8 A. M. — By boat to *Kalmia glauca* and thence to scouring-rush.

Again a strong cold wind from the north by west, turning up the new and tender pads. The young white lily pads are now red and crimson above, while greenish beneath. Nightshade dark-green shoots are eight inches long. Button-bush would commonly be said to begin to leaf.

At Clamshell. *Ranunculus acris* and *bulbosus* pollen apparently about two or three days. Comandra pollen apparently two days there. *Arenaria serpyllifolia* and scleranthus, how long? White oak pollen. The oaks apparently shed pollen about four days later than last year; may be owing to the recent cold weather. Interrupted fern pollen the 23d; may have been a day or two. Cinnamon fern to-day. Checkerberry shoots one inch high. *Carex stipata?* Close-spiked sedge in Clamshell Meadow some time. Early willow on right

[1] Or toad?

Kalmia glauca

Is one white willow Gray's var. 2d. *cærulea*?

The golden robin keeps whistling something like *Eat it, Potter, eat it!*

Carex exilis (??), river-shore opposite Wheeler's gate, six inches high, but the culm smooth — some time.

Is that sweet-scented vernal grass just begun to bloom at celtis shore?

Fir balsam begun to leaf — with flower.

Cottony aphides on white pines. Hear a quail and the summer spray frog,[1] amid the ring of toads.

May 20. 8 A. M. — By boat to *Kalmia glauca* and thence to scouring-rush.

Again a strong cold wind from the north by west, turning up the new and tender pads. The young white lily pads are now red and crimson acorn, white greenish beneath. Nightshade dark green shoots are eight inches long. Bulbous bush would commonly be said to begin to leaf.

At Clamshell *Chamæcyparis acris* and *bulbosus* pollen apparently round two or three days. Comandra pollen apparently two days there. *Arenaria serpyllifolia* and sub-sandbox bow long? White oak pollen. The oaks apparently shed pollen about four days later than last year; may be owing to the recent cold weather. Interrupted fern pollen the fish; may have been a day or two. Cinnamon fern to-day. Checkerberry shoots one inch high. *Carex stipata?* Close-spiked sedge in Clamshell Meadow some time. Early willow on right

[1] Or [illegible]?
Kalmia glauca

beyond Hubbard's Bridge leafed since 12th; say 19th or *generally* before button-bush.

At Kalmia Swamp. — Nemopanthes, apparently several days, and leaf say before tupelo. White spruce pollen one or two days at least, and now begins to leaf.

To my surprise the *Kalmia glauca* almost all out; perhaps began with rhodora. A very fine flower, the more interesting for being early. The leaf say just after the lambkill. I was wading through this white spruce swamp just to look at the leaves. The more purple rhodora rose here and there above the small andromeda, so that I did not at first distinguish the *K. glauca*. When I did, probably my eyes at first confounded it with the lambkill, and I did not remember that this would not bloom for some time. There were a few leaves just faintly started. But at last my eyes and attention both were caught by those handsome umbels of the *K. glauca*, rising, one to three together, at the end of bare twigs, six inches or more above the level of the andromeda, etc., together with the rhodora.[1] Umbels, one and one half inches [in] diameter, of five to eighteen flowers on red threads three quarters to an inch long, at first deep rose-color, after pale rose. Twigs bare except two or three small old leaves close to the end of the dry-looking twigs. Flowers not arranged in whorls about the twig, but rising quite above it. The larger flowers about nine-sixteenths inch diameter. Flowers somewhat larger, methinks, and more terminal than lambkill. The whole about two feet

[1] The rhodora did not accompany it into the more open and level and wet parts, where was andromeda almost alone.

high in sphagnum. The lambkill is just beginning to be flower-budded.

What that neat song-sparrow-like nest of grass merely, in the wet sphagnum under the andromeda there, with three eggs, — in that very secluded place, surrounded by the watery swamp and andromeda, — — from which the bird stole like a mouse under the andromeda? *Vide* egg. It is narrower and more pointed at one end and lighter, a little, — the brown less confluent, — than that of the song sparrow with one spot on breast which took from ivy tree tuft. The last is bluish-white very thickly spotted and blotched with brown. Four eggs first seen, I think, the 22d.

Swamp-pink leaf before lambkill. A mosquito. Lupine in house from Fair Haven Hill, and probably in field.

At the screech owl's nest I now find two young slumbering, almost uniformly gray above, about five inches long, with little dark-grayish tufts for incipient horns (?). Their heads about as broad as their bodies. I handle them without their stirring or opening their eyes. There are the feathers of a small bird and the leg of the *Mus leucopus* in the nest.

The partridge which on the 12th had left three cold eggs covered up with oak leaves is now sitting on eight. She apparently deserted her nest for a time and covered it. Already the mouse-ear down begins to blow in the fields and whiten the grass, together with the bluets. In Conant's thick wood on the White-Pond-ward lane, hear the evergreen-forest note, but commonly, at a distance, only the last notes — a fine sharp *té té*. The

mountain laurel near scouring-rush apparently just begun to leaf. Trientales open. Do I not hear a tanager? See a beautiful blue-backed and long-tailed pigeon sitting daintily on a low white pine limb.

I perceive no new life in the pipes (*Equisetum hyemale*), except that some are flower-budded at top and *may* open in a week, and on pulling them up I find a new one just springing from the base at root. The flower-bud is apparently on those dry-looking last year's plants which I thought had no life in them.

Returning, I lay on my back again in Conant's thick wood. Saw a redstart over my head there; black with a sort of brick red on sides [of] breast, spot on wing, and under root of tail. Note heard once next day, at Kalmia Swamp, somewhat like *aveet aveet aveet aveet.* In the meanwhile hear another note, very *smart* and somewhat sprayey, rasping, *tshrip tshrip tshrip tshrip*, or five or six times with equal force each time. The bird hops near, directly over my head. It is black, with a large white mark forward on wings and a fiery orange throat, above and below eye, and line on crown, yellowish beneath, white vent, forked tail, dusky legs and bill; holds its wings (which are light beneath) loosely. It inclines to examine about the lower branches of the white pines or midway up. The Blackburnian warbler very plainly; whose note Nuttall knows nothing about.

Two-leaved Solomon's-seal pollen not long in most places. *Ranunculus recurvatus* at Corner Spring up several days at least; pollen. Trillium pollen maybe several days. Arum, how long? The *Ranunculus*

Purshii in that large pool in the Holden Swamp Woods makes quite a show at a little distance now.

See to-day (and saw the 23d) a larger peetweet-like bird on the shore, with longer, perhaps more slender, wings, black or blackish without white spots; all white beneath; and when it goes off it flies higher. Is it not the *Totanus solitarius*, which Brown found at Goose Pond?

I think that the red-fruited choke-berry has shed pollen about a day, though I have not examined. The leaves are a little downy beneath and the common peduncle and the pedicels stout and quite hairy, while the black-fruited is smooth and gloossy.

May 27. P. M. — To Fair Haven Pond, taking boat opposite Puffer's.

Still a very strong wind from northerly, and hazy and rather cool for season. The fields now begin to wear the aspect of June, their grass just beginning to wave; the light-colored withered grass seen between the blades, foliage thickening and casting darker shadows over the meadows, elm-tree-tops thick in distance, deciduous trees rapidly investing evergreens, haze with the strong wind. How important the dark evergreens now seen through the haze in the distance and contrasting with the gauze-like, as yet thin-clad deciduous trees! They are like solid protuberances of earth. A thrasher's nest on the bare open ground with four eggs which were seen three days ago. The nest is as open and exposed as it well can be, lined with roots, on a slight ridge where a rail fence has been, some rods

from any bush. Saw the yellow-legs on one side flying over the meadow *against* the strong wind and at first mistook it for a hawk. It appeared now quite brown, with its white rump; and, excepting [for] its bill and head, I should have taken it for a hawk; between the size of male harrier and the male pigeon hawk, or say the size of a dove. It alighted on the shore. And now again I think it must be the large one.

The blue yellow-back or parti-colored warbler still, with the chestnut crescent on breast, near my Kalmia Swamp nest. See a painted turtle on a hill forty or fifty feet above river, probably laying eggs. Some mountain sumach has grown one inch, some not started; some button-bush three inches, some not started. The first must be put after the last. *Myosotis stricta* under Cliffs, how long? The meadow fragrance to-day. How interesting the huckleberries now generally in blossom on the knoll below the Cliff — countless wholesome red bells, beneath the fresh yellow-green foliage! The berry-bearing vaccinium! It is a rich sight. Geranium at Bittern Cliff, apparently several days, and *Arabis rhomboidea* there in meadow, apparently still longer — say seven or eight days; but I am doubtful about the "slender style tipped with a conspicuous stigma." Carrion-flower a foot high. Crimson gall on a shrub oak. A loose-spiked sedge at Bittern Cliff Meadow, — forgot to bring, — a foot high.

May 28. How's morus not yet, apparently, for two or three days, though the stigmas are obvious. Buttonwood stigmas are now brown, since the 24th.

P. M. — To Middle Conantum Cliff.

Yesterday left my boat at the willow opposite this Cliff, the wind northwest. Now it is southeast, and I can sail back. *Our* quince open this morning, possibly yesterday; and some others, I believe, much earlier. Do I not hear a short snappish, rasping note from a yellow-throat vireo? I see a tanager, the most brilliant and tropical-looking bird we have, bright-scarlet with black wings, the scarlet appearing on the rump again between wing-tips. He brings heat, or heat him. A remarkable contrast with the green pines. At this distance he has the aspect and manners of a parrot, with a fullness about the head and throat and beak, indolently inspecting the limbs and twigs — leaning over to it — and sitting still a long time. The female, too, is a neat and handsome bird, with the same indolent ways, but very differently colored from the male; all yellow below with merely dusky wings, and a sort of clay(?)-color on back.

While we sit by the path in the depths of the woods three quarters of a mile beyond Hayden's, confessing the influence of almost the first summer warmth, the wood thrush sings steadily for half an hour, now at 2.30 P. M., amid the pines, — loud and clear and sweet. While other birds are warbling betweenwhiles and catching their prey, he alone appears to make a business of singing, like a true minstrel. Is that one which I see at last in the path, above dusky olive-brown becoming *ferruginous* on base of tail, eye not very prominent with a white line around it, some dark-colored feathers apparently on outer wing-coverts, very light-

colored legs, with dashes on breast which I do not see clearly? I should say that it had not the large black eye of the hermit thrush, and I cannot see the yellowish spot on the wings; yet it may have been this.

I find the feathers apparently of a brown thrasher in the path, plucked since we passed here last night. You can generally find all the tail and quill feathers in such a case. The apple bloom is very rich now. Fever-bush shoots are now two inches long; say begin to leaf just before late willow. Black ash shoots three inches long; say with late willow. White pine and pitch pine shoots from two to five inches long. *Rubus triflorus* at Miles Swamp will apparently open to-morrow. *Some* krigia done some days. *Silene antirrhina.* Barberry open (probably two or more days at Lee's). C. says he has seen a green snake. Examined my two yellowbirds' nests of the 25th. Both are destroyed, — pulled down and torn to pieces probably by some bird, — though they [had] but just begun to lay. Large yellow and black butterfly. The leaves of kalmiana lily obvious.

I have seen within three or four days two or three new warblers which I have not identified; one to-day, in the woods, all pure white beneath, with a full breast, and greenish-olive-yellow (?) above, with a duskier head and a slight crest muscicapa-like, on pines, etc., high; very small.[1]

Also one all lemon-yellow beneath, except whitish vent, and apparently bluish above.

[1] Perhaps young and female redstarts.

May 29. P. M. — To Island Neck.

That willow by the rock south of Island (of May 2d) appears to be without doubt the *Salix sericea*, — the leaves beginning to turn black quite soon, and the bark is *very* bitter.[1] There is, then, another small willow or sallow with narrower and shining leaves, very common along river, with longer catkins and very long tapering smooth pods, — I mean the one I have associated with the *S. alba*.

Azalea nudiflora in garden.

There are a great many birds now on the Island Neck. The red-eye, its clear loud song in bars continuously repeated and varied; all tempered white beneath and dark yellow olive above and on edge of wings, with a dark line on side-head or from root of bill; dusky claws, and a very long bill. The long bill and the dark line on the side of the head, with the white above and beneath, or in the midst of the white, giving it a certain oblong, swelled-cheek look, would distinguish on a side view. There is also the warbling vireo, with its smooth-flowing, continuous, one-barred, shorter strain, with methinks a dusky side-head. Also the yellow-throated vireo — its head and shoulders as well as throat yellow (apparently olive-yellow above), and its strain but little varied and short, not continuous. It has dusky legs and two very distinct white bars on wings (the male).

I see the first swamp sparrow of the season, and probably heard its loud song; clear, broad, undivided

[1] June 6th. — The leaves answer well to the account, and the bitter bark and brittle twig at base.

chestnut or bay (?) crown and clear *dark-ash* throat and breast, and light, perhaps yellowish, line over eye, dark bill, and much bay (?) on wings. Low, amid the alders.

But what is that bird I hear much like the first part of the yellowbird's strain, only two thirds as long and varied at end, and not so loud, — *a-che che che, che-á,* or *tche tche tche, tche-a,* or *ah tche tche tche, chit-i-vet?*

It is very small, not timid, but incessantly changing its position on the pitch pines, etc. Some a pure dull white, some tawny-white, beneath; some cinereous, others more dusky still, above; with a flycatcher or muscicapa bill and head (head rounded?), but — what is most remarkable — a very deeply forked or divided tail with a broad black tip beneath, and toward the roots a fire-brick-color, this last color much brighter on the sides of the breast, and some of it on the wings in a broad bar, though some perhaps have not the last mark. Did I see some of the yellowish on rump? Dark-ash above and some reddish-brown (?). One is very inquisitive; hops down toward me lower and lower on the pitch pine twigs, while I hold out my hand till within five feet, but in such a light that I cannot distinguish its colors. There are at least half a dozen of them about; continually flitting about, sometimes in a circle of a few rods' diameter, one pursuing another, both male and female, back to near the same spot, but I can hardly bring my glass to bear on them before they change their position. It is undoubtedly young males and the females of the redstart, described by Wilson, — very different from the full-plumaged black males.

I see on the first limb of a white oak, close to the trunk and about eight feet from the ground, squatting as if asleep, a chipping squirrel two thirds grown. The hole it came out of, apparently, is four or five feet from the base of the tree. When I am about to put my hand on it, it runs feebly up the tree and rests again as much higher in a similar place. When C. climbs after, it runs out quite to the end of a limb, where it can hardly hold on, and I think it will drop every moment with the shaking of the tree.

May 30. Saw bird's nest on an apple by roadside, seven feet high; one egg.

Cherry-bird on a cherry; also pecking at the apple blossoms. Minott says that within two or three days a stream of winged ants came out from under his door-sill, and the hens and countless swallows and the kingbirds came and fed on them. Buttonwood flowers now effete; fertile flowers were not brown on the 24th, but were the 28th; say, then, about the 26th.

Nuttall thus describes the note of the white-eyed vireo: It is much varied; in March in Florida, "*ss't* (with a whistle) *wá wĭtte wĭtte wē-wá* (the first part very quick);" in June at Fresh Pond, "*'tshĭppewee-wá-say tshippewee-wée-was-say*, sweetly whistled," with great compass of voice and loudness, etc., etc.; other variations. Also "*'whĭp te woĭ wee*, the last syllable but one considerably lengthened and clearly whistled." [1]

Lepidium virginicum, roadside bank at Minott's.

[1] [*A Manual of the Ornithology of the United States and of Canada*, second edition, vol. i, p. 348.]

The myrica, bayberry, plucked on the 23d, now first sheds pollen in house, the leaf being but little more expanded on the flowering shoot. Gray says, "somewhat preceding the flowers." The catkins about a quarter of an inch long, erect, sterile, oval, on the sides of last year's twigs.

P. M. — Up railroad.

A strong west wind and much haze. Silvery potentilla, four or five days at least. In the thick of the wood between railroad and Turnpike, hear the evergreen-forest note, and see probably the bird, — black throat, greenish-yellow or yellowish-green head and back, light-slate (?) wings with two white bars. Is it not the black-throated green warbler? I find close by a small fresh egg on the forest floor, with a slight perforation, white (with perhaps a tinge of flesh-color (?) when full), and brown spots and black marks at the larger end. In Brewer's synopsis the egg of the black-throat is described as "light flesh-color with purple spots." But these spots are not purple. I could find no nest.

Senecio in open meadows, say yesterday. See a small black snake run along securely through thin bushes (alders and willows) three or four feet from the ground, passing intervals of two feet easily, — very readily and gracefully, — ascending or descending. *Cornus Canadensis* out, how long?

Green lice from birches (?) get on my clothes.

Is it not summer now when the creak of the crickets begins to be general?

Poison-dogwood has grown three or four inches at

ends of last year's shoots, which are three to six feet from ground.

Hear a familiar warbler not recognized for some years, in the thick copse in Dennis's Swamp, south of railroad; considerably yellowbird-like (the note) — *tshe tshe tshar tshar tchit, tchit tit te vet.* It has apparently a yellow head, bluish or slaty wings with two white bars, tail even, wings dusky at tips, legs light, bill dark, beneath all bright-yellow, remarkably striped lengthwise with dusky, more or less dark in different specimens. Can it be the *S. maculosa*, or black and yellow warbler, seen formerly? I did not see the black — nor indeed the back at all well. It may have been a female, not described by Wilson. Frequents the tops of trees.

Ladies' slipper, apparently.

May 31. Another windy, washing day, but warm. See a yellowbird building a nest on a white oak on the Island. She goes to a fern for the wool. In evening hear distinctly a *tree-toad.*[1]

[1] And again the 4th of June.

X

JUNE, 1855

(ÆT. 37)

June 1. A *very* windy day, the third, drowning the notes of birds, scattering the remaining apple blossoms. Rye, to my surprise, three or four feet high and glaucous. Cloudy and rain, threatening withal. Surveying at Holden wood-lot, I notice the *Equisetum hyemale*, its black-scaled flowerets now in many cases separated so as to show the green between, but not yet in open rings or whorls like the *limosum*.

I find the *Linnæa borealis* growing near the end of the ridge in this lot toward the meadow, near a large white pine stump recently cut. C. has found the arethusa out at Hubbard's Close; say two or three days at a venture, there being considerable.

June 2. Still windier than before, and yet no rain. It is now very dry indeed, and the grass is suffering. Some springs commonly full at this season are dried up. The wind shakes the house night and day. From that cocoon of the *Attacus cecropia* which I found — I think it was on the 24th of May — on a red maple shrub, three or four feet from the ground, on the edge of the meadow by the new Bedford road just this side of Beck Stow's, came out this forenoon a splendid moth. I had pinned the cocoon to the sash at the

upper part of my window and quite forgotten it. About the middle of the forenoon Sophia came in and exclaimed that there was a moth on my window. At first I supposed that she meant a cloth-eating moth, but it turned out that my *A. cecropia* had come out and dropped down to the window-sill, where it hung on the *side* of a slipper (which was inserted into another) to let its wings hang down and develop themselves. At first the wings were not only not unfolded laterally, but not longitudinally, the thinner ends of the forward ones for perhaps three quarters of an inch being very feeble and occupying very little space. It was surprising to see the creature unfold and expand before our eyes, the wings gradually elongating, as it were by their own gravity; and from time to time the insect assisted this operation by a slight shake. It was wonderful how it waxed and grew, revealing some new beauty every fifteen minutes, which I called Sophia to see, but never losing its hold on the shoe. It looked like a young emperor just donning the most splendid ermine robes that ever emperor wore, the wings every moment acquiring greater expansion and their at first wrinkled edge becoming more tense. At first its wings appeared double, one within the other. At last it advanced so far as to spread its wings completely but feebly when we approached. This occupied several hours. It continued to hang to the shoe, with its wings ordinarily closed erect behind its back, the rest of the day; and at dusk, when apparently it was waving its wings preparatory to its evening flight, I gave it ether and so saved it in a perfect state. As it lies, not

spread to the utmost, it is five and nine tenths inches by two and a quarter.

P. M. — To Hill.

Equisetum limosum pollen — a few — apparently two or three days. The late cratægus on the hill is in full bloom while the other is almost entirely out of bloom.

Three yellowbirds' nests, which I have marked since the 25th of May, the only ones which I have actually inspected, have now all been torn to pieces, though they were in places (two of them, at least) where no boy is at all likely to have found them.

I see in the meadow-grass a fine cobweb or spider's nest three or four inches [in] diameter and, within it, on two twigs, two collections of little yellowish spiders containing a thousand or more, about half as big as a pin-head, like minute fruit-buds or kernels clustered on the twig. One of the clusters disperses when I stoop over it and spreads over the nest on the fine lines.

Hemlock leafed two or three days, the earliest young plants. The black spruce beyond the hill has apparently just begun to leaf, but not yet to blossom. *Pinus rigida* pollen a day or two or three on the plain. Sweet-flag pollen about two days.

Mr. Hoar tells me that Deacon Farrar's son tells him that a white robin has her nest on an apple tree near their house. Her mate is of the usual color. All the family have seen her, but at the last accounts she has not been seen on the nest.

Silene, or wild pink, how long?

The *Azalea nudiflora* now in its prime. What splendid masses of pink! with a few glaucous green leaves sprinkled here and there — just enough for contrast.

June 3. A rainy day at last. Caraway in garden apparently three days out.

June 4. P. M. — To Hubbard's Close.

Clears up in forenoon. Some of the scouring-rush gathered the 1st begins to open its whorls or stages in the chamber; say sheds pollen to-morrow. Not quite yet the How mulberry pollen. White clover out probably some days, also red as long.

It has just cleared off after this first rain of consequence for a long time, and now I observe the shadows of massive clouds still floating here and there in the peculiarly blue sky; which dark shadows on field and wood are the more remarkable by contrast with the light yellow-green foliage now, and when they rest on evergreens they are doubly dark, like dark rings about the eyes of June. Great white-bosomed clouds, darker beneath, float through the cleared sky and are seen against the deliciously blue sky, such a sky as we have not had before. Thus it is after the first important rain at this season. The song of birds is more lively and seems to have a new character; a new season has commenced. In the woods I hear the tanager and chewink and red-eye. It is fairly summer, and mosquitoes begin to sting *in earnest*. I see the dandelions now generally gone to seed amid the grass — their

downy spheres. There are now many potentillas ascendant, and the *Erigeron bellidifolius* is sixteen inches high and quite handsome, by the railroad this side of turn-off.

Redstarts still very common in the Trillium Woods (yesterday on Assabet also). Note *tche tche, tche vit,* etc. I see some dark on the breast.

The *Lycopodium dendroideum* now shows fresh green tips like the hemlock. Greenish puffs on panicled andromedas. Lint comes off on to clothes from the tender leaves, but it is clean dirt and all gone when you get home; and now the crimson velvety leafets of the black oak, showing also a crimson edge on the downy under sides, are beautiful as a flower, and the more salmon white oak. The *Linnæa borealis* has grown an inch. But are not the flowers winter-killed? I see dead and blackened flower-buds. Perhaps it should have opened before. Wintergreen has grown two inches.

See a warbler much like the black and white creeper, but perched warbler-like on trees; streaked slate, white, and black, with a large white and black mark on wing, crown divided by a white line and then chestnut (?) or slate or dark, and then white above and below eye, breast and throat streaked downward with dark, rest beneath white. Can it be the common black and white creeper? Its note hardly reminds me of that. It is somewhat like *pse pse pse pse, psa psa, weese weese weese,* or longer. It did not occur to me that it was the same till I could not find any other like this in the book.

Cotton-grass apparently two or three days out.

Geum, apparently some days. In the clintonia swamp I hear a smart, brisk, loud and clear whistling warble, quite novel and remarkable, something like *te chit a wit, te chit a wit, tchit a wit, tche tche.* It is all bright-yellow or ochreous orange (?) below except vent, and a dark or black crescent on breast, with a white line about eye. Above it appears a nearly uniform dark blue slate, legs light, bill dark (?), tail long and forked. I think it must be the Canada warbler, seen in '37,[1] though that seems *short* for this. It is quite different from the warbler of May 30.

The recent high winds have turned the edges of young leaves by beating and killing them.

Ellen Emerson finds the *Viola pubescens* scarce to-day, but the *Actæa alba* in full bloom. Eddy has brought a great polygonatum from Medford, which he says grew in the woods there. I do not find a satisfactory account of it. It differs from the *pubescens* of Gray, in that the leaves can hardly be called downy beneath and are clasping, the peduncles are two to five flowered (instead of one to two) and the perianth is four fifths of an inch long (instead of a half). Perianth white or whitish with green lobes. It differs from the *canaliculatum* in not being channelled obviously (though angled *between the leaves*), the filaments not being smooth nor inserted in the middle of the tube.

Carex scoparia (?) in meadows some days.

June 5. P. M. — To Clamshell by river.

[1] [A surprising entry, the Canada warbler being a common migrant, brilliantly marked, and from its habits eminently observable.]

Yellow Bethlehem-star in prime. Aphyllon, or orobanche, well out apparently several days. *Nuphar Kalmiana* budded above water. Green-briar flower out apparently two or three days. Low blackberry out in low ground. That very early (or in winter green radical leaf) plant by ash is the *Myosotis laxa*, open since the 28th of May, say June 1st. *Ranunculus reptans*, say two days out, river being very low. Common cress well out along river. Side-flowering sandwort apparently three days out in Clamshell *flat* meadow. Some oxalis done, say two or three days, on ditch bank. *Ranunculus repens* in prime. Yellow clover well out some days. Flowering ferns, reddish-green, show on meadows. Green oak-balls.

Walking along the upper edge of the flat Clamshell meadow, a bird, probably a song sparrow (for I saw two chipping about immediately after), flew up from between my feet, and I soon found its nest remarkably concealed. It was under the thickest of the dry river wreck, with an entry low on one side, full five inches long and very obscure. On looking close I detected the eggs from above by looking down through some openings in the wreck about as big as sparrows' eggs, through which I saw the eggs, five in number. I never saw the nest so perfectly concealed.

I am much interested to see how Nature proceeds to heal the wounds where the turf was stripped off this meadow. There are large patches where nothing remained but pure black mud, nearly level or with slight hollows like a plate in it. This the sun and air had cracked into irregular polygonal figures, a foot,

more or less, in diameter. The whole surface of these patches here is now covered with a short, soft, and pretty dense moss-like vegetation springing up and clothing it. The little hollows and the cracks are filled with a very dense growth of reddish grass or sedge, about one inch high, the growth in the cracks making pretty regular figures as in a carpet, while the intermediate spaces are very evenly but much more thinly covered with minute sarothra and whitish *Gnaphalium uliginosum*. Thus the wound is at once scarred over. Apparently the seeds of that grass were heavier and were washed into the hollows and cracks. Is it likely that the owner has sprinkled seed here? [1]

June 6. P. M. — Up Assabet by boat to survey Hosmer's field.

On the Island I hear still the redstart — *tsip tsip tsip tsip, tsit-i-yet,* or sometimes *tsip tsip tsip tsip, tse vet.* A young male. It repeats this at regular intervals for a long time, sitting pretty still now. Waxwork open and pollen one or two days. I notice a clam lying up, and two or three cleared or light-colored places, apparently bream-nests commenced.

You see the dark eye and shade of June on the river as well as on land, and a dust-like tint on river, apparently from the young leaves and bud-scales, covering the waters, which begin to be smooth, and imparting a sense of depth. Blue-eyed grass maybe several days in some places. One thimble-berry blossom done — probably several days. There are now those large

[1] No.

swarms of black-winged millers (?) a half-inch long, with two long streamers ahead, fluttering three to six inches over the water; not long, methinks; also other insects. I see a yellow-spotted tortoise twenty rods from river, and a painted one four rods from it which has just made a hole for her eggs. Two catbirds' nests in the thickest part of the thicket on the edge of Wheeler's meadow near Island. One done laying (I learn after); four eggs, green, — much darker green than the robin's and more slender in proportion. This is *loosely* placed in the forks of a broad alternate or silky cornel bush, about five feet from the ground, and is composed of dead twigs and a little stubble, then grape-vine bark, and is lined with dark root-fibres. Another, eight rods beyond, rests still more loosely on a *Viburnum dentatum* and birch; has some dry leaves with the twigs, and one egg, — about six feet high. The bird hops within five feet.[1]

The white maple keys are about half fallen. It is remarkable that this happens at the time the emperor moth (cecropia) comes out. *Carex crinita* (?), a few days, along bank of Assabet. Whiteweed, Merrick's pasture shore, these two or three days.

The *Salix cordata* (which apparently blossomed some days after the *S. sericea*) is very common on Prichard's shore and also Whiting's. Also at the last place is a small shrub, — a little of it, — perhaps *S. lucida*, which apparently blossomed about same time [as], or a day or two after, the *sericea*.

[1] This egg gone on the 9th.

June 7. Rain.

In afternoon — mizzling weather — to Abel Hosmer Woods.

Cistus, apparently yesterday, open. A yellowbird's nest on a willow bough against a twig, ten feet high, four eggs. I have heard no musical *gurgle-ee* from blackbirds for a fortnight. They are now busy breeding.

June 8. P. M. — Goose Pond.

High blueberry. A crow two thirds grown tied up for a scarecrow. A tanager's (?) nest in the topmost forks of a pitch pine about fifteen feet high, by Thrush Alley; the nest very slight, apparently of pine-needles, twigs, etc.; can see through it; bird on.

In that pitch pine wood see two rabbit forms (?), very snug and well-roofed retreats formed by the dead pine-needles falling about the base of the trees, where they are upheld on the dead stubs from the butt at from six inches to a foot from the ground, as if the carpet [of the] forest floor were puffed up there. Gnawed acorn-shells in them. Two *Fringilla pusilla* nests in my old potato-field, at the foot of little white pines each; made of dried grass lined with hair, snug in the sod. Four eggs to each; one lot nearly hatched; with reddish-brown spots, especially toward larger end, but a light opening quite at that end; smaller, slenderer, and less spotted than the song sparrow's. The bird is ash side-head, ferruginous above, mahogany bill and legs, two whitish bars. Eggs do not agree with account? Nuttall says this bird's eggs are so thick with ferruginous as to appear almost wholly of that color! A jay's nest

with three young half fledged in a white pine, six feet high (in it), by the Ingraham cellar, made of coarse sticks. Hear, I am pretty sure, a rose-breasted grosbeak sing. See apparently a summer duck in Goose Pond. C. says he saw two other *dark* ducks here yesterday. A great many devil's-needles in woods within a day or two. G. Brooks told me on June 1st that a few evenings before he saw as many as a thousand chimney swallows pour down into Goodnow's chimney.

A catbird's nest on the peninsula of Goose Pond — four eggs — in a blueberry bush, four feet from ground, close to water; as usual of sticks, dry leaves, and bark lined with roots.

What was that little nest on the ridge near by, made of fine grass lined with a few hairs and containing five small eggs (two hatched the 11th), nearly as broad as long, yet pointed, white with fine dull-brown spots especially on the large end — nearly hatched? The nest in the dry grass under a shrub, remarkably concealed.[1]

Found in this walk, of nests, one tanager, two baywing, one blue jay, one catbird, and the last named.

June 9. P. M. — To Wheeler's azalea swamp, across meadow.

Early primrose done, say two days. An orchis, probably yellowish, will be common in Wheeler's meadow.[2]

[1] June 11. — It is a Maryland yellow-throat; *runs* and *flies* along *the ground* away like a nighthawk. Can't trace it off, it goes so low in the grass, etc., at first. Very shy it is.

[2] [A marginal query here.]

Sidesaddle, apparently a day or two; petals hang down. A song sparrow's nest low in Wheeler's meadow, with five eggs, made of grass lined with hair. *Rhus Toxicodendron* on Island Rock.

The nest probably of the small pewee — looking from the ground like a yellowbird's, showing reddish wool of ferns — against a white birch, on a small twig, eighteen feet from ground. Four little eggs, all pale cream-color before blowing, white after — fresh. A yellowbird's nest eight feet from ground in crotch of a very slender maple. A chip-bird's in a white thorn on the Hill; one egg.

A catbird's nest, three eggs, in a high blueberry, four feet from ground, with rather more dry leaves than usual, above Assabet Spring. Lambkill out. Catbird's nest, one egg, on a blueberry bush, three feet from ground, of (as usual) sticks, leaves, bark, roots. Another near same (also in V. Muhlenbergii Swamp) on a bent white birch and andromeda, eighteen inches from ground; three eggs; stubble of weeds mainly instead of twigs, otherwise as usual. A chewink's nest sunk in ground under a bank covered with ferns, dead and green, and huckleberry bushes; composed of dry leaves, then grass stubble, and lined with a very few slender, reddish moss stems; four eggs, rather fresh; merely enough moss stems to indicate its choice. Fever-root, *perhaps* several days.

See very few hawks for several weeks.

Found to-day, of nests, one song sparrow, one small pewee (?), one yellowbird, one chip-bird, three cat-

birds, one chewink, one robin (the last on a black willow, two feet from ground, one egg).

I think I have hardly heard a bobolink for a week or ten days.

June 10. P. M. — To owl's nest.

A remarkably strong wind from the southwest all day, racking the trees very much and filling the air with dust. I do not remember such violent and incessant gusts at this season. Many eggs, if not young, must have been shaken out of birds' nests, for I hear of some fallen. It is almost impossible to hear birds — or to keep your hat on. The waves are like those of March.

That common grass,[1] which was in blossom a fortnight since, and still on our bank, began a week ago to turn white here and there, killed by worms. *Veronica scutellata*, apparently a day or two. *Iris versicolor*, also a day or two. A red maple leaf with those crimson spots. Clintonia, apparently four or five days (not out at Hubbard's Close the 4th).

A catbird's nest of usual construction, one egg, two feet high on a swamp-pink; an old nest of same near by on same.

Some *Viola cucullata* are now nine inches high, and leaves nearly two inches wide. Archangelica staminiferous umbellets, say yesterday, but some, apparently only pistilliferous ones, look some days at least older; seed-vessel pretty large.

[1] June-grass.

Oven-bird's nest with four eggs two thirds hatched, under dry leaves, composed of pine-needles and dry leaves and a hair or two for lining, about six feet southwest of a white oak which is six rods southwest of the hawk pine. The young owls are gone. The *Kalmia glauca* is done before the lambkill is begun here; apparently was done some days ago. A very few rhodoras linger.

Nest of a kingbird or wood pewee [1] on a white [*sic*] spruce in the Holden Swamp, about fifteen feet high, on a small branch near the top, of a few twigs and pine-needles, and an abundance of usnea mainly composing and lining and overflowing from it, very open beneath and carelessly built, with a small concavity; with three eggs pretty fresh, but apparently all told, cream-color before blowing, with a circle of brown spots about larger end. The female (?) looked darker beneath than a kingbird and uttered that clear plaintive *till tilt*, like a robin somewhat, sitting on a spruce.

C. finds an egg to-day, somewhat like a song sparrow's, but a little longer and slenderer, or with less difference between the ends in form, and more finely and regularly spotted *all over* with pale brown. It was in a pensile nest of grape-vine bark, on the low branch of a maple. Probably a cowbird's; fresh-laid.

He has found in nests of grass in thick bushes near river what he thought red-wing's eggs,[2] but they are pale-blue with large black blotches — one with a very

[1] Probably of *Muscicapa Cooperi* or pe-pe, disc[overed] by Nuttall (?). *Vide* May 15.

[2] Yes.

large black spot on one side. Can they be bobolinks? or what?[1]

My partridge still sits on seven eggs.

The black spruce which I plucked on the 2d expanded a loose, rather light brown cone on the 5th, say. Can that be the pistillate flower? The white spruce cones are now a rich *dark* purple, more than a half-inch long.

Nuttall thus describes the *Muscicapa Cooperi*, olive-sided flycatcher, or pe-pe: —

"Spec. Charact. — Dusky brown; head darker, without discolored spot; sides olive grey; lateral space beneath the wing white; lower mandible purplish horn color; tail nearly even and extending but little beyond the closed wings."

No white on tail; secondaries and coverts edged with whitish; "rictus bright yellow, as well as the inside of the mouth and tongue." "Chin white." "Sides dusky olive, a broad line down the middle of the breast, with the abdomen and rump yellowish white; a broadish white space on the side, beneath the wing towards the back." "This species, though of the size of the King-bird, is nearly related to the Wood Pewee, yet perfectly distinct."

Of note, her "oft repeated, whining call of *'pŭ 'pŭ*, then varied to *'pŭ pĭp*, and *'pĭp pŭ*, also at times *'pĭp 'pĭp 'pŭ*, *'pĭp 'pĭp 'pĭp*, *'pŭ 'pŭ pĭp*, or *'tŭ 'tŭ 'tŭ*, and *'tŭ 'tŭ*. This shrill, pensive, and quick whistle sometimes dropped almost to a whisper, or merely *'pŭ*. The tone was in fact much like that of the *'phŭ 'phŭ*

[1] Probably red-wings.

'phŭ of the Fish Hawk. The male, however, besides this note, at long intervals, had a call of *'eh'phèbēē*, or *'h'phebéā*, almost exactly in the tone of the circular tin whistle, or bird-call." [1]

June 11. How's morus, staminate flowers apparently only a day or two (pollen); the pistillate a long time. The locust apparently two or three days open.

When I would go a-visiting I find that I go off the fashionable street — not being inclined to change my dress — to where man meets man and not polished shoe meets shoe.

According to Holland's "History of Western Massachusetts," in Westfield, "In 1721, it was voted that the pews next the pulpit should be highest in dignity. The next year it was voted that persons should be seated in the meeting house according to their age and estate, and that so much as any man's estate is increased by his negroes, '*that shall be left out.*' If a man lived on a hired farm, 'or hath obtained his property by marrying a widow, it shall be reckoned only one-third,' that is, he shall have only one-third as much dignity as if he owned his farm, or had acquired his money by his own industry." [2]

What if we feel a yearning to which no breast answers? I walk alone. My heart is full. Feelings impede the current of my thoughts. I knock on the earth

[1] [*A Manual of the Ornithology of the United States and of Canada*, second edition, vol. i, pp. 298–302.]

[2] [Josiah Gilbert Holland, *History of Western Massachusetts*, vol. ii, pp. 142, 143.]

for my friend. I expect to meet him at every turn; but no friend appears, and perhaps none is dreaming of me. I am tired of frivolous society, in which silence is forever the most natural and the best manners. I would fain walk on the deep waters, but my companions will only walk on shallows and puddles. I am naturally silent in the midst of twenty from day to day, from year to year. I am rarely reminded of their presence. Two yards of politeness do not make society for me. One complains that I do not take his jokes. I took them before he had done uttering them, and went my way. One talks to me of his apples and pears, and I depart with my secret untold. His are not the apples that tempt me.

Now (September 16, '55), after four or five months of invalidity and worthlessness, I begin to feel some stirrings of life in me.

Is not that carex, *Pennsylvanica*-like, with a long spike (one inch long by one half-inch wide), *C. bullata?*

What a difference between one red-wing blackbird's egg and another's! C. finds one long as a robin's, but narrow, with large black spots on larger end and on side, on or between the bushes by riverside; another much shorter, with a large black spot on the side. Both pale-blue ground.

The early willows at the bridge are apparently either *S. discolor* or *eriocephala*, or both.

I have noticed the green oak-balls some days. Now observe the dark *evergreen* of June.

The target leaf is eaten above.

In order to get the deserted tanager's nest at the top

[of] a pitch pine which was too weak to climb, we carried a rope in our pockets and took three rails a quarter of a mile into the woods, and there rigged a derrick, by which I climbed to a level with the nest, and I could see if there were eggs in it. I have the nest. Tied the three tops together and spread the bottoms.

Carex cephalophora (?) on Heywood's Peak. That fine, dry, wiry wild grass in hollows in woods and sprout-lands, never mown, is apparently the *C. Pennsylvanica*, or early sedge. There are young bluebirds.

June 12. *Tuesday.* Down river to swamp east of Poplar Hill.

I hear the toad, which I have called "spray *frog*" falsely, *still.* He sits close to the edge of the water and is hard to find — hard to tell the direction, though you may be within three feet. I detect him chiefly by the motion of the great swelling bubble in his throat. A peculiarly rich, sprayey dreamer, now at 2 P. M.! How serenely it ripples over the water! What a luxury life is to him! I have to use a little geometry to detect him. Am surprised at my discovery at last, while C. sits by incredulous. Had turned our prow to shore to search. This rich, sprayey note possesses all the shore. It diffuses itself far and wide over the water and enters into every crevice of the noon, and you cannot tell whence it proceeds.

Young red-wings now begin to fly feebly amid the button-bushes, and the old ones chatter their anxiety. At mouth of Mill Brook, a red-wing's nest tied on to that thick, high grass and some low willow, eighteen

inches from ground, with four eggs variously marked, full of young.

In a hedge thicket by meadow near Peter's Path, a catbird's nest, one egg; as usual in a high blueberry, in the thickest and darkest of the hedge, and very loosely built beneath on joggle-sticks.

In the thick swamp behind the hill I look at the vireo's nest which C. found on the 10th, within reach on a red maple forked twig, eight feet from ground. He took one cowbird's egg from it, and I now take the other, which he left. There is no vireo's egg, and it is said they always desert their nest when there are two cowbird's eggs laid in it. I saw a red-eye lurking near. Have the nest. Near by, in a part of the swamp which had been cleared and then burnt apparently by accident, we find the nest of a veery on a tussock eight inches high, which like those around has been burnt all off close and black. The nest is directly in the top, the outside burnt. It contains three eggs, which have been scorched, discolored, and cooked, — one cracked by the heat, though fresh. Some of the sedge has since sprung up green, eight inches high, around here and there. All the lower part of the nest is left, an inch thick with dead leaves, — maple, etc., — and well lined with moss stems (??). It is a dry swamp.

In a high blueberry bush, on the Poplar Hill-side, four feet from ground, a catbird's nest with four eggs, forty feet high up the hill. They even follow the blueberry up-hill.

A field sparrow's nest with three young, on a *Vac-*

cinium vacillans, rose, and grass, *six inches from ground*, made of grass and hair.

A *Carya tomentosa* hickory on the hill well out, *and froth on the nuts*, almost all out and black; perhaps three or four days.

A hawthorn grows near by, just out of bloom, twelve feet high — *Cratægus Oxyacantha*. A veronica at Peetweet Rock; forget which kind. A crow blackbird's nest high in an elm by riverside just below the Island. C. climbed to it and got it. I have it. There were eggs. Bottom of mud and coarse grass and sedge, lined with finer grass and dry weed stems. Another in an elm rear of Loring's, in a recess where a limb was once broken off, open on one side, eighteen feet high. Young with heads out almost ready to fly.

Nuttall says of the cowbird's egg, "If the egg be deposited in the nest alone, it is uniformly forsaken;" has seen "sometimes 2 of these eggs in the same nest, but in this case one of them commonly proves abortive." "Is almost oval, scarcely larger than that of the Bluebird." He says it is "thickly sprinkled with points and confluent touches of olive brown, of two shades, somewhat more numerous at the greater end, on a white ground tinged with green. But in some of these eggs the ground is almost pure white, and the spots nearly black." [1]

June 13. C. finds a pigeon woodpecker's nest in an apple tree, five of those pearly eggs, about six feet from the ground; could squeeze your hand in. Also

[1] [*Op. cit.*, pp. 193–195.]

a peetweet's, with four eggs, in Hubbard's meadow beyond the old swamp oak site; and two kingbirds' nests with eggs in an apple and in a willow by riverside.

June 14. *Thursday.* Up river.

See young red-wings; like grizzly-black vultures, they are still so bald. See many empty red-wing nests now amid the *Cornus sericea.* The bluebird's nest high in the black willow at Sassafras Shore has five eggs. The gold robin's nest, which I could pull down within reach, just beyond, has three eggs. I have one. I told C. to look into an old mortise-hole in Wood's Bridge for a white-bellied swallow's nest, as we were paddling under; but he laughed, incredulous. I insisted, and when he climbed up he scared out the bird. Five eggs. "You see the feathers about, do you not?" "Yes," said he.

Kalmiana lily, several days. The little galium in meadow, say one day. A song sparrow's (?) nest in ditch bank under Clamshell, of coarse grass lined with fine, and five eggs nearly hatched and a peculiar dark end to them. Have one or more and the nest. The bird evidently deserted the nest when two eggs had been taken. Could not see her return to it, nor find her on it again after we had flushed her. A kingbird's nest with four eggs on a large horizontal stem or trunk of a black willow, four feet high, over the edge of the river, amid small shoots from the willow; outside of mikania, roots, and knotty sedge, well lined with root-fibres and wiry weeds. *Viburnum dentatum,* apparently not long, say two days, and carrion-flower the same.

Looked at the peetweet's nest which C. found yesterday. It was very difficult to find again in the broad open meadow; no nest but a mere hollow in the dead cranberry leaves, the grass and stubble ruins, under a little alder. The old bird went off at last from under us; low in the grass at first and with *wings up*, making a worried sound which attracted other birds. I frequently noticed others afterward flying low over the meadow and alighting and uttering this same note of alarm. There [were] only four eggs in this nest yesterday, and to-day, to C.'s surprise, there are the two eggs which he left and a young peetweet beside; a gray pinch of down with a black centre to its back, but already so old and precocious that it runs with its long legs swiftly off from squatting beside the two eggs, and hides in the grass. We have some trouble to catch it. How came it here with these eggs, which will not be hatched for some days? C. saw nothing of it yesterday. J. Farmer says that young peetweets run at once like partridges and quails, and that they are the only birds he knows that do. These eggs were not addled (I had opened one, C. another). Did this bird come from another nest, or did it belong to an earlier brood? Eggs white, with black spots here and there all over, dim at great end.

A cherry-bird's nest and two eggs in an apple tree fourteen feet from ground.[1] One egg, round black spots and a few oblong, about equally but thinly dispersed over the whole, and a dim, internal, purplish tinge about the large end. It is difficult to see anything of

[1] *Vide* 16th.

the bird, for she steals away early, and you may neither see nor hear anything of her while examining the nest, and so think it deserted. Approach very warily and look out for them a dozen or more rods off.

It suddenly began to rain with great violence, and we in haste drew up our boat on the Clamshell shore, upset it, and got under, sitting on the paddles, and so were quite dry while our friends thought we were being wet to our skins. But we had as good a roof as they. It was very pleasant to lie there half an hour close to the edge of the water and see and hear the great drops patter on the river, each making a great bubble; the rain seemed much heavier for it. The swallows at once and numerously began to fly low over the water in the rain, as they had not before, and the toads' spray rang in it. After it began to hold up, the wind veered a little to the east and apparently blew back the rear of the cloud, and blew a second rain somewhat in upon us.

As soon as the rain was over I crawled out, straightened my legs, and stumbled at once upon a little patch of strawberries within a rod, — the sward red with them. These we plucked while the last drops were thinly falling.

Silene antirrhina out on Clamshell, how long?

June 15. *Friday.* To Moore's Swamp.

Robin's nest in apple tree, twelve feet high — young nearly grown. Hair-bird's nest on main limb of an apple tree, horizontal, ten feet high. Many pollywogs an inch long. In the swamp a catbird's nest in the

darkest and thickest part, in a high blueberry, five feet from ground, two eggs; bird comes within three feet while I am looking.

Viburnum nudum, how long? Not long.

Wool(?)-grass.

I see a strange warbler still in this swamp. A chestnut and gray backed bird, five or six inches long, with a black throat and yellow crown; note, *chit chit chill le le*, or *chut chut a wutter chut a wut, che che.*

Crimson frosting on maple leaves. The swamp pyrus twigs are in some places curving over and swollen, and curling up at ends, forming bunches of leaves.

June 16. *Saturday.* The cherry-bird's egg was a satin color, or very pale slate, with an internal or what would be called black-and-blue ring about large end.

P. M. — To Hubbard's Grove, on river.

A sparrow's nest with four gray eggs in bank beyond ivy tree. Four catbirds half fledged in the green-briar near bathing-place, hung three feet from ground.

Examined a kingbird's nest found before (13th) in a black willow over edge of river, four feet from ground. Two eggs. West of oak in Hubbard's meadow. Catbird's nest in an alder, three feet from ground, three fresh eggs.

See young and weak striped squirrels nowadays, with slender tails, asleep on horizontal boughs above their holes, or moving feebly about; might catch them. Redstarts in the swamp there. Also see there a blue yellow-green-backed warbler, with an orange breast

and throat, white belly and vent, and forked tail — indigo-blue head, etc.

Ground-nut, how long?

A painted tortoise just burying three flesh-colored eggs in the dry, sandy plain near the thrasher's nest. It leaves no trace on the surface. Find near by four more about this business. When seen they stop stock-still in whatever position, and stir not nor make any noise, just as their shells may happen to be tilted up.

June 18. To Hemlocks.

Sparganium. A yellowbird feigns broken wings. Woodcock.

At 3 P. M., as I walked up the bank by the Hemlocks, I saw a painted tortoise just beginning its hole; then another a dozen rods from the river on the bare barren field near some pitch pines, where the earth was covered with cladonias, cinquefoil, sorrel, etc. Its hole was about two thirds done. I stooped down over it, and, to my surprise, after a slight pause it proceeded in its work, directly under and within eighteen inches of my face. I retained a constrained position for three quarters of an hour or more for fear of alarming it. It rested on its fore legs, the front part of its shell about one inch higher than the rear, and this position was not changed essentially to the last. The hole was oval, broadest behind, about one inch wide and one and three quarters long, and the dirt already removed was quite wet or moistened. It made the hole and removed the dirt with its hind legs only, not using its tail or shell, which last of course could not

enter the hole, though there was some dirt on it. It first scratched two or three times with one hind foot; then took up a pinch of the loose sand and deposited it directly behind that leg, pushing it backward to its full length and then deliberately opening it and letting the dirt fall; then the same with the other hind foot. This it did rapidly, using each leg alternately with perfect regularity, standing on the other one the while, and thus tilting up its shell each time, now to this side, then to that. There was half a minute or a minute between each change. The hole was made as deep as the feet could reach, or about two inches. It was very neat about its work, not scattering the dirt about any more than was necessary. The completing of the hole occupied perhaps five minutes.

It then without any pause drew its head completely into its shell, raised the rear a little, and protruded and dropped a wet flesh-colored egg into the hole, one end foremost, the red skin of its body being considerably protruded with it. Then it put out its head again a little, slowly, and placed the egg at one side with one hind foot. After a delay of about two minutes it again drew in its head and dropped another, and so on to the fifth — drawing in its head each time, and pausing somewhat longer between the last. The eggs were placed in the hole without any *particular* care, — only well down flat and [each] out of the way of the next, — and I could plainly see them from above.

After these ten minutes or more, it without pause or turning began to scrape the moist earth into the hole with its hind legs, and, when it had half filled it, it

carefully pressed it down with the edges of its hind feet, dancing on them alternately, for some time, as on its knees, tilting from side to side, pressing by the whole weight of the rear of its shell. When it had drawn in thus all the earth that had been moistened, it stretched its hind legs further back and to each side, and drew in the dry and lichen-clad crust, and then danced upon and pressed that down, still not moving the rear of its shell more than one inch to right or left all the while, or changing the position of the forward part at all. The thoroughness with which the covering was done was remarkable. It persevered in drawing in and dancing on the dry surface which had never been disturbed, long after you thought it had done its duty, but it never moved its fore feet, nor once looked round, nor saw the eggs it had laid. There were frequent pauses throughout the whole, when it rested, or ran out its head and looked about circumspectly, at any noise or motion. These pauses were especially long during the covering of its eggs, which occupied more than half an hour. Perhaps it was hard work.

When it had done, it immediately started for the river at a pretty rapid rate (the suddenness with which it made these transitions was amusing), pausing from time to time, and I judged that it would reach it in fifteen minutes. It was not easy to detect that the ground had been disturbed there. An Indian could not have made his cache more skillfully. In a few minutes all traces of it would be lost to the eye.

The object of moistening the earth was perhaps to enable it to take it up in its hands (?), and also to pre-

vent its falling back into the hole. Perhaps it also helped to make the ground more compact and harder when it was pressed down.[1]

June 19. *Tuesday.* P. M. — Up Assabet.

A pewee's nest (bird apparently small pewee, nest apparently wood pewee's) on a white maple's nearly horizontal bough, eighteen feet above water, opposite Hemlocks; externally of lichens from the maple trunk, and hemlock (?) twigs, very inconspicuous, like a lichen-covered knot.[2] I hear many wood pewees about here.

Young song sparrows flutter about.

A yellowbird's nest saddled on a horizontal (or slanting down amid twigs) branch of a swamp white oak, within reach, six feet high, of fern down and lint; a sharp cone bottom; four eggs, just laid, pale flesh-color with brown spots; have one.

There are a great many glaucous and also hoary and yellowish-green puffs on the *Andromeda paniculata* now, some four inches in diameter. Wood tortoises united, with heads out of water.

Did I enumerate the sharp-shinned hawk among ours?

Mr. Bull found in his garden this morning a snapping turtle about twenty rods from the brook, which had there just made a round hole (apparently with head) 2½ inches in diameter and 5+ deep, in a slanting direction. I brought her home and put her into a pen in the garden that she might lay (she weighed seven pounds five ounces), but she climbed over an

[1] *Vide* September 10th.

[2] Empty on July 25th.

upright fence of smooth stakes twenty-two inches high.

June 20. A catbird's nest eight feet high on a pitch pine in Emerson's heater piece, partly of paper. A summer yellowbird's, saddled on an apple, of cotton-wool, lined with hair and feathers, three eggs, white with flesh-colored tinge and purplish-brown and black spots. Two hair-birds' nests fifteen feet high on apple trees at R. W. E.'s (one with two eggs). A robin's nest with young, which was lately, in the great wind, blown down and somehow lodged on the lower part of an evergreen by arbor, — without spilling the young!

June 21. Saw a white lily in Everett's Pond.

Sparrow's nest, four eggs, deep in the moist bank beyond cherry-bird's nest (have three), of peculiar color. She deserted the nest after one was taken. Outside of stubble, scantily lined with fibrous roots. Clams abundant within three feet of shore, and bream-nests. The early grass is ripe or browned, and clover is drying. Peetweets make quite a noise calling to their young with alarm.

On an apple at R. W. E.'s a small pewee's nest, on a horizontal branch, seven feet high, almost wholly of hair, cotton without, not incurved at edge; four eggs, pale cream-color.

June 22. At 6 P. M. the temperature of the air is 77°, of river one rod from shore 72°. Warmest day yet.

June 23. Probably a redstart's nest (?) on a white oak sapling, twelve feet up, on forks against stem. Have it. See young redstarts about.

Hear of flying squirrels now grown.

June 25. Under E. Wood's barn, a phœbe's nest, with two birds ready to fly; also barn swallow's nest lined with feathers, hemisphere or cone against side of sleeper; five eggs, delicate, as well as white-bellied swallow's.

June 26. C. has found a wood pewee's nest on a horizontal limb of a small swamp white oak, ten feet high, with three fresh eggs, cream-colored with spots of two shades in a ring about large end. Have nest and an egg.

June 28. On river.

Two red-wings' nests, four eggs and three — one without any black marks. Hear and see young golden robins which have left the nest, now peeping with a peculiar tone. Shoals of minnows a half-inch long. Eel-grass washed up.

June 30. 2 P. M. — Thermometer north side of house, 95°; in river where one foot deep, one rod from shore, 82°.

XI

JULY, 1855

(ÆT. 37–38)

July 2. Young bobolinks are now fluttering over the meadow, but I have not been able to find a nest, so concealed in the meadow-grass.

At 2 P. M. — Thermometer north side of house .	93°
Air over river at Hubbard's Bath	88°
Water six feet from shore and one foot deep .	84½°
" near surface in middle, where up to neck .	83½°
" at bottom in same place, pulling it up quickly	83½°

Yet the air on the wet body, there being a strong south-west wind, feels colder than the water.

July 3. 4 P. M. — Air out-of-doors generally, 86°. On the sand between rails in the Deep Cut, 103°. Near the surface of Walden, fifteen rods from shore, 80°. Three feet below the surface there, and everywhere nearer shore (and probably further from it), 78°.

July 4. To Boston on way to Cape Cod with C.

The schooner Melrose was advertised to make her first trip to Provincetown this morning at eight. We reached City (?) Wharf at 8.30. "Well, Captain Crocker, how soon do you start?" "To-morrow morning at 9 o'clock." "But you have advertised to leave at 8

this morning." "I know it, but we are going to lay over till to-morrow." ! ! ! So we had to spend the day in Boston, — at Athenæum gallery, Alcott's, and at the regatta. Lodged at Alcott's, who is about moving to Walpole.

July 5. In middle of the forenoon sailed in the Melrose. We hugged the Scituate shore as long as possible on account of wind. The great tupelo on the edge of Scituate is very conspicuous for many miles about Minot's Rock. Scared up a flock of young ducks on the Bay, which have been bred hereabouts. Saw the petrel.[1]

Went to Gifford's Union House (the old Tailor's Inn) in Provincetown. They have built a town-house since I was here — the first object seen in making the port. Talked with Nahum Haynes, who is making fisherman's boots there. He came into the tavern in the evening. I did not know him — only that he was a Haynes. He remembered two mud turtles caught in a seine with shad on the Sudbury meadows forty years ago, which would weigh a hundred pounds each. Asked me, "Who was that man that used to live next to Bull's, — acted as if he were crazy or out?"

Talked with a man who has the largest patch of cranberries here, — ten acres, — and there are fifteen or twenty acres in all.

The fishermen sell lobsters fresh for two cents apiece.

July 6. Rode to North Truro very early in the stage

[1] [*Cape Cod*, p. 264; Riv. 320.]

Provincetown

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[1] Cape Cod, p. 264; Riv. 309.

or covered wagon, on the new road, which is just finished as far as East Harbor Creek. Blackfish on the shore. Walked from post-office to lighthouse. Fog till eight or nine, and short grass very wet. Board at James Small's, the lighthouse, at $3.50 the week.

Polygala polygama well out, flat, ray-wise, all over the fields. *Cakile Americana*, sea-rocket, the large weed of the beach, some time and going to seed, on beach. Pasture thistle (*Cirsium pumilum*), out some time. A great many white ones. The boy, Isaac Small, got eighty bank swallows' eggs out of the clay-bank, *i. e.* above the clay. Small says there are a few great gulls here in summer. I see small (?) yellow-legs. Many crow blackbirds in the dry fields hopping about. Upland plover near the lighthouse breeding. Small once cut off one's wing when mowing in the field next the lighthouse as she sat on her eggs. Many seringo-birds, apparently like ours. They say mackerel have just left the Bay, and fishermen have gone to the eastward for them. Some, however, are catching cod and halibut on the back side. Cape measures two miles in width here on the great chart.[1]

July 7. *Smilax glauca* in blossom, running over the shrubbery. *Honkenya peploides*, sea sandwort, just out of bloom on beach. The thick-leaved and dense-tufted, upright plant *Salsola Kali*, saltwort, prickly and glaucous, in bloom. Beach pea (*Lathyrus maritimus*) going out of bloom.[2]

[1] [*Cape Cod*, pp. 164, 167; Riv. 196, 200.]

[2] [*Cape Cod*, p. 167; Riv. 200.]

C. says he saw in the catalogue of the Mercantile Library, New York, "Peter Thoreau on Book-keeping, London."

The piping plover running and standing on the beach, and a few mackerel gulls skimming over the sea and fishing. Josh (?) pears [1] ("*juicy*," suggests Small) just begun; few here compared with Provincetown; do not cook them.

Seaside goldenrod (*Solidago sempervirens*) not nearly yet.

Xanthium echinatum, sea cocklebur or sea-burdock, not yet.[2]

What that smilacina-like plant very common in the shrubbery, a foot high, with now green fruit big as peas at end of spike, with reddish streaks? Uncle Sam calls it snake-corn.[3] Brought home some fruit.

Just south of the lighthouse near the bank on a steep hillside, the savory-leaved aster (*Diplopappus linarifolius*) and mouse-ear (*Gnaphalium plantaginifolium*) form a dense sward, being short and thick; [the aster] not yet out.[4] Scarlet pimpernel, or poor-man's weather-glass (*Anagallis arvensis*), in bloom some time, very common on sandy fields and sands, and very pretty, with a peculiar scarlet.[5]

July 8. A northeasterly storm. A great part of beach bodily removed and a rock five feet high exposed

[1] [The fruit of the shad-bush. See *Cape Cod*, p. 203; Riv. 244.]

[2] I saw its burs early in October in New Bedford.

[3] It is *Smilacina racemosa*.

[4] Out July 10th. [*Cape Cod*, p. 135; Riv. 160.]

[5] [*Cape Cod*, p. 167; Riv. 200.]

— before invisible — opposite lighthouse. The black-throated bunting common among the shrubbery. Its note much like the Maryland yellow-throat's, — *wittichee te tchea, tche te tchea, tche.*[1]

The *Corema Conradii*, broom crowberry, is quite common at edge of higher bank just south of the light-house. It is now full of small green fruit, small pin-head size. It spreads from a centre, raying out and rooting every four or five inches. It forms peculiar handsome-shaped mounds, four or five feet in diameter by nine inches or a foot high, very soft springy beds to lie on, — a woodman's bed already spread.[2]

I am surprised at the number of large light-colored toads everywhere hopping over these dry and sandy fields.

Went over to Bay side. That pond at Pond Village three eighths of a mile long and densely filled with cat-tail flag seven feet high. Many red-wing black-birds in it. Small says there are two kinds of cat-tail there, one the barrel flag for coopers, the other shorter for chairs; he used to gather them.[3]

See the killdeer a dozen rods off in pasture, anxious about its eggs or young, with its shrill squeaking note, its ring of white about its neck and two black crescents on breast. They are not so common and noisy as in June. A milkweed out some days.

Hudsonia tomentosa, the downy, still lingering, and *ericoides* even yet up to 17th. The last is *perhaps* the most common.

[1] [*Cape Cod*, p. 131; Riv. 156.] [2] [*Cape Cod*, p. 167; Riv. 200.]
[3] [*Cape Cod*, p. 142; Riv. 169.]

Euphorbia polygonifolia, seaside spurge, small and flat on pure sand. Did n't notice flower. *Lemna minor*, duckweed, duck-meat, covering the surface at the pond, — scale-like. See a nighthawk at 8 A. M., sitting lengthwise on a rail. Asked Small if a quarter of the fuel of North Truro was driftwood. He thought it was, beside some lumber. None of the *Mya arenaria* on back side, but a small thicker-shelled clam, *Mesodesma arctata*, with a golden-yellow epidermis, very common on the flats, which S. said was good to eat. The shells washed up were commonly perforated; could dig them with your hands.[1]

S. said that nineteen small yellow birds (probably goldfinches) were found dead under the light in the spring early.[2]

July 9. Peterson brings word of blackfish. I went over and saw them. The largest about fourteen feet long. Nineteen years ago three hundred and eighty at this (Great) Hollow in one school. Sometimes eat them. Small says they generally come about the last of July; some yield five barrels, average one barrel.[3]

A kind of artemisia or sea wormwood by Bay-side on sand-hills, not out. Bay-wings here.

I find the edible mussel generally in bunches as they were washed off the rocks thirty or forty together, held together by the twine-like byssus. Many little mussels on the rocks exposed at high tide.

[1] [*Cape Cod*, p. 110; Riv. 130.]
[2] [*Cape Cod*, p. 170; Riv. 204.]
[3] [See *Cape Cod*, pp. 142–146; Riv. 170–174.]

Uncle Sam Small, half blind, sixty-six years old, remembers the building of the lighthouse and their prophecies about the bank wasting. Thought the now overhanging upper solid parts *might* last ten years. His path had sometimes lasted so long (? ?). Saw him making a long diagonal slanting path with a hoe, in order to get up a small pile of stuff on his back. (There lay his hooked pike-staff on the bank ready for immediate use.) But this path was destroyed before we left. Told of a large rock which was carried along the shore half a mile.[1] He gets all his fuel on the beach. At flood-tide there is a strong inshore current to north. We saw some (perhaps) bales of grass, or else dried bits of marsh, six feet long carried along thus very fast a quarter of a mile out. Told us of man-eating sharks, one twelve feet long, which he killed and drew up with his oxen.

No quahogs on this side.

Now, with a clear sky and bright weather, we see many dark streaks and patches where the surface of the ocean is rippled by fishes, mostly menhaden, far and wide, in countless myriads, such the populousness of the sea. Occasionally, when near, can see their shining sides appear — and the mackerel gulls dive. Also see bass, whiting, cod, etc., turn up their bellies, near the shore.[2] The distant horizon a narrow blue line from distance (?) like mountains. They call peetweets shore-birds here. Small thought the waves never ran less than seven or eight feet up the shore here, though

[1] [*Cape Cod*, p. 155; Riv. 186.]

[2] [*Cape Cod*, p. 120; Riv. 142, 143.]

these might be perfectly smooth.[1] Speaks of mackerel gulls breeding on islands in Wellfleet Harbor.

July 10. The sea, like Walden, is greenish within half a mile of shore, then blue. The purple tinges near the shore run far up and down. Walked to marsh head of East Harbor Creek. Marsh rosemary (*Statice Limonium*), "meadow root," rays small, out some time, with five reddish petals. Also see there samphire of two kinds, *herbacea* and *mucronata*. *Juncus Gerardii*, black grass, in bloom. The pigweed about seashore is remarkably white and mealy. Great devil's-needles above the bank, apparently catching flies. I see a brood of young peeps running on the beach under the sand-hills ahead of me. Indigo out. Heard a cannon from the sea, which echoed under the bank dully, as if a part of the bank had fallen; then saw a pilot-boat standing down and the pilot looking through his glass toward the distant outward-bound vessel, which was putting back to speak with him. The latter sailed many a mile to meet her. She put her sails aback and communicated alongside.

July 11. See *young* piping plover running in a troop on the beach like peetweets. Patches of shrub oaks, bayberry, beach plum, and early wild roses, overrun with woodbine. What a splendid show of wild roses, whose sweetness is mingled with the aroma of the bayberry! !

Small made three thousand shingles of a mast, worth six dollars a thousand.

[1] [*Cape Cod*, p. 156; Riv. 186.]

A bar wholly made within three months; first exposed about first of May; as I paced, now seventy-five rods long and six or eight rods wide at high water, and bay within six rods wide. The bay has extended twice as far, but is filled up.

Lespedeza Stuvei (?) or *procumbens* (?).

I see five young swallows dead on the sand under their holes. Fell out and died in the storm?

The upland plover hovers almost stationary in the air with a quivering note of alarm. Above, dark-brown interspersed with white, darkest in rear; gray-spotted breast, white beneath; bill dark above, yellowish at base beneath, and legs yellowish. *Totanus Bartramius* — "gray," "grass," "field" plover.

Bank at lighthouse one hundred and seventy feet on the slope, perpendicular one hundred and ten; say shelf slopes four and ordinary tide-fall is nine, makes one hundred and twenty-three in all. Saw sand-bank south fifteen to twenty-five feet higher.

Small says *cantle* for quintal. Mackerel-fishing not healthy like cod-fishing; hard work packing the mackerel, stooping over.

July 12. Peterson says he dug one hundred and twenty-six dollars' worth of small clams near his house in Truro one winter, — twenty-five bucketfuls at one time. One man forty. Says they are scarce because they feed pigs on them. I measure a horseshoe on the back side twenty-two inches by eleven. The low sand-downs between East Harbor head and sea are thinly covered with beach-grass, seaside goldenrod,

and beach pea. Fog wets your beard till twelve o'clock.[1]

Long slender seaside plantain leaf (?) at East Harbor head. *Solanum* (with white flowers) *nigrum* (?) in marsh. *Spergularia rubra* var. *marina*. Great many little shells by edge of marsh — *Auricula bidentata* (?) and *Succinea avara* (?).

Great variety of beetles, dor-bugs, etc., on beach. I have one green shining one. Also butterflies over bank. Small thought the pine land was worth twenty-five cents an acre. I was surprised to see great spider-holes in pure sand and gravel, with a firm edge, where man could not make a hole without the sand sliding in, — in tunnel form.

They are gone off for mackerel and cod; also catching mackerel, halibut, and lobsters about here for the market.

The upland plover begins with a quivering note somewhat like a tree-toad and ends with a long, clear, somewhat plaintive (?) or melodious (?) hawk-like scream. I never heard this very near to me, and when I asked the inhabitants about it they did not know what I meant. Frank Forester, in "Manual for Young Sportsmen," 1856, page 308, says, "This bird has a soft plaintive call or whistle of two notes, which have something of a ventriloquial character and possess this peculiarity, that when uttered close to the ear, they appear to come from a distance, and when the bird is really two or three fields distant, sound as if near at hand." It hovers on quivering wing, and alights by a steep dive.

[1] [*Cape Cod*, p. 165; Riv. 198.]

My paper so damp in this house I can't press flowers without mildew, nor dry my towel for a week.[1]

Small thought there was no stone wall west of Orleans. Squid the bait for bass. Small said the blackfish ran ashore in pursuit of it. Hardly use pure salt at Small's. Do not drink water.[2] S. repeats a tradition that the back side was frozen over one mile out in 1680 (?). Often is on Bay, but never since on Atlantic.

July 13. About $33,000 has been appropriated for the protection of Provincetown Harbor. Northeast winds the strongest. Caught a box tortoise. It appeared to have been feeding on insects, — their wing-cases, etc., in its droppings, — also leaves. No undertow on the bars because the shore is flat.

July 14. The sea has that same streaked look that our meadows have in a gale.

Go to Bay side. Stench of blackfish. The lobster holds on to the pot himself. Throw away the largest. Find French crown. I was walking close to the water's edge just after the tide had begun to fall, looking for shells and pebbles, and observed on the still wet sand, under the abrupt caving edge of the bank, this dark-colored round, flat — old button? I cheated my companion by holding up round *Scutella parma* on the bars, between my fingers.[3] High hill — where town-house? — in Provincetown; according to big map, 109 feet high.

[1] [*Cape Cod*, p. 165; Riv. 198.] [2] [*Cape Cod*, p. 165; Riv. 198.]
[3] [*Cape Cod*, p. 161; Riv. 193.]

When numerous you may count about eighty vessels at once. A little kelp and rockweed grow offshore here. Nest of grass-bird (?), — grass stubble, lined with grass and root-fibres, three eggs half hatched, under a tuft of beach-grass, a quarter of a mile inland. Have an egg. Measured apple trees at Uncle Sam's.

They say the keeper of Billingsgate Light a few days ago put his initials in [a] thousand dollars' worth of blackfish in one morning, and got that of Provincetown for them.[1] Another, some years ago, got one hundred in a morning, and sold them for fifteen hundred dollars. Got a fox's skull. Thirty-six feet from base to centre of this light. Light called in book one hundred and seventy-one feet above sea?

Found washed up, and saw swimming in the cove where we bathed, young mackerel two inches long.

Uncle Sam says there is most drift in the spring; so in our river. He calls his apple trees "he."

July 16. Why not have one large reflector instead of many small ones, for a strong light? Uva-ursi berries begin to redden. Beach-grass grows on the highest land here. Uncle Sam tells of sea-turtles, which he regarded as natives, as big as a barrel, found on the marsh; of more than one kind.[2] Call the fishing captains skippers. The oak wood north of Rich's or Dyer's Hollow, say twenty years old, nine feet high. Red (?) oaks, etc. Can see soil on edge of bank covered five feet deep with sand which has blown up, on the

[1] [*Cape Cod*, pp. 145, 146; Riv. 173, 174.]

[2] [*Cape Cod*, p. 202; Riv. 243.]

highest part of bank. See three black snakes on sand just behind edge of bank. Blueberries only one inch high.

July 18. Leave Small's. Corn-cockle, or rose-campion, a handsome flower, by East Harbor Marsh. *Lychnis Githago*, how long? Perfect young horseshoe crab shells there. Goosefoot by marsh very spreading, with entire, obovate leaves. Came up in the Olata, Captain Freeman, a fine yacht. Little wind; were from half past eight into candle-light on water. Melrose and another, which started with us, were ten miles astern when we passed light-boat. Kept pace awhile with a steamer towing one of Train's ships far in the north. The steamer looked very far from ship, and some wondered that the interval continued the same for hours. Smoke stretched perfectly horizontal for miles over the sea, and, by its direction, warned me of a change in the wind before we felt it.[1]

July 19. In Concord.

Young bobolinks; one of the first autumnalish notes. The early meadow aster out.

July 21. A red-eyed vireo nest on a red maple on Island Neck, on meadow-edge, ten feet from ground; one egg half hatched and one cowbird's egg, nearly fresh (!), a trifle larger. The first white (the minute brown dots washing off), sparsely black-dotted at the large end. Have them.

[1] [*Cape Cod*, pp. 264, 265; Riv. 320, 321.]

July 22. I hear that many of those balls have been found at Flint's Pond within a few days. See small flocks of red-wings, young and old, now, over the willows. The pigeon woodpeckers have flown. Dog-day weather begins.

July 25. Many little toads about.

That piece of hollow kelp stem which I brought from the Cape is now shrivelled up and is covered and all white with crystals of salt a sixth of an inch long, like frost, on all sides.[1]

Morrhua vulgaris is the cod of Europe and Newfoundland. Those caught off our coast are the *M. Americana.*

July 30. Saw the lightning on the telegraph battery and heard the shock about sundown from our window, — an intensely bright white light.

July 31. Our dog-days seem to be turned to a rainy season. Mr. Derby, whose points of compass I go to regulate, tells me that he remembers when it rained for three weeks in haying time every day but Sundays.

Rode to J. Farmer's. He says that on a piece of an old road on his land, discontinued forty years ago, for a distance of forty rods which he plowed, [he found] two or three dollars in small change. Among the rest he showed me an old silver piece about as big as a ten-cent-piece, with the word *skilli*, etc., etc., on it, apparently a Danish shilling?

[1] [*Cape Cod*, p. 69; Riv. 79.]

His boy has a republican swallow's egg, long and much spotted; a dove's egg. Found a bay-wing's nest and got an egg; three half hatched, with dark *spots*, not *lines;* low in grass; of stubble, lined with root-fibres and then horsehair; in a dry field of his. He gave me what he called the seringo's egg. (He calls it chickle-see.)[1] Pointed out the bird to me. Says that she enters to her nest by a long gallery, sometimes two or three feet long, under the grass, and the nest is very hard to find. Gave me a small pure white egg. The boy thought it a small pewee's (?).

Farmer showed me that every wilted or diseased pigweed had green lice on its root. He says he sometimes finds the marsh wren's nest in meadows, hung to the grass, and hole on one side. Hears it almost every night near the brook beyond Dr. Bartlett's. Has found lark's nest covered over.

Found lately on his sand two arrowheads, and, close by, a rib and a shoulder-blade and kneepan (?), he thinks of an Indian.

His son Edward gave me a blue jay's egg as well as the seringo's above named, also another, rounder and broader egg found in that open field without any nest, *maybe* the same kind, somewhat singularly marked, but whiter at one end and browner at the other.

Mr. Samuel Hoar tells me that about forty-eight years ago, or some two or three years after he came to Concord, where he had an office in the yellow store, there used to be a great many bullfrogs in the mill-pond, which, by their trumping in the night, disturbed the

[1] Does he mean whittiche, Maryland yellow-throat?

apprentices of a Mr. Joshua Jones who built and lived in the brick house near by and soon after set up the trip-hammer. But, as Mr. H. was going one day to or from his office (he boarded this side the Mill-Dam), he found that the apprentices had been round the pond in a boat knocking the frogs on the head; got a good-sized tub nearly full of them. After that scarcely any were heard, and, the trip-hammer being set up soon after, they all disappeared as if frightened away by the sound. But perhaps the cure was worse than the disease, for I know of one, then a young minister studying divinity, who boarded in that very brick house, who was so much disturbed by that trip-hammer that, out of compassion, he was taken in at the old parsonage.

Mr. H. remembers that blackfish oil, which was used at the tan-yards, was sold to put on horses and keep the flies off.

Tree-toads sing more than before. Have observed the twittering over of goldfinches for a week.

XII

AUGUST, 1855

(ÆT. 38)

Aug. 1. P. M. — To Conantum by boat.

Squirrels have eaten and stripped pitch pine cones. Small rough sunflower a day or two. *Diplopappus cornifolius* (how long?) at Conant Orchard Grove. In the spring there, which has not been cleared out lately, I find a hairworm, eight or nine inches long and big as a pin-wire; is biggest in the middle and tapers thence to tail; at head is abruptly cut off; curly in your fingers like the tendril of a vine. I spent half an hour overhauling the heaps of clamshells under the rocks there. Was surprised to find the anodon and the green-rayed clams there.

Pennyroyal and alpine enchanter's-nightshade well out, how long?

Young Adams of Waltham tells me he has been moose-hunting at Chesuncook. Hunted with a guide in evening without horn, it being too early to call them out. Heard the water dropping from their muzzles when they lifted their heads from feeding on the pads, as they stood in the river.

Aug. 2. Silas Hosmer tells me of his going a-spearing in Concord River up in Southboro once with some friends of his. It is a mere brook there, and they went

along the bank without any boat, one carrying a large basket of pine and another the crate and a third the spear. It was hard work. He afterward showed them how they did here, by going in *midsummer* with them and catching a great many.

Aug. 4. Just after bathing at the rock near the Island this afternoon, after sunset, I saw a flock of thousands of barn swallows and some white-bellied, and perhaps others, for it was too dark to distinguish them. They came flying over the river in loose array, wheeled and flew round in a great circle over the bay there, about eighty feet high, with a loud twittering as if seeking a resting-place, then flew up the stream. I was very much surprised at their numbers. Directly after, hearing a buzzing sound, we found them all alighted on the dense golden willow hedge at Shattuck's shore, parallel with the shore, quite densely leaved and eighteen feet high. They were generally perched five or six feet from the top, amid the thick leaves, filling it for eight or ten rods. They were very restless, fluttering from one perch to another and about one another, and kept up a loud and remarkable buzzing or squeaking, breathing or hum, with only occasionally a regular twitter, now and then flitting alongside from one end of the row to the other. It was so dark we had to draw close to see them. At intervals they were perfectly still for a moment, as if at a signal. At length, after twenty or thirty minutes of bustle and hum, they all settled quietly to rest on their perches, I supposed for the night. We had rowed up within a

rod of one end of the row, looking up so as to bring the birds between us and the sky, but they paid not the slightest attention to us. What was remarkable was: first, their numbers; second, their perching on densely leaved willows; third, their buzzing or humming, like a hive of bees, even squeaking notes; and fourth, their disregarding our nearness. I supposed that they were preparing to migrate, being the early broods.

Aug. 5. 4 A. M. — On river to see swallows.

They are all gone; yet Fay saw them there last night after we passed. Probably they started very early. I asked Minott if he ever saw swallows migrating, not telling him what I had seen, and he said that [he] used to get up and go out to mow very early in the morning on his meadow, as early as he could see to strike, and once, at that hour, hearing a noise, he looked up and could just distinguish high overhead fifty thousand swallows. He thought it was in the latter part of August.

What I saw is like what White says of the swallows, in the autumn, roosting "every night in the osier beds of the aits" of the river Thames; and his editor, Jesse, says, "Swallows in countless numbers still assemble every autumn on the willows growing on the aits of the river Thames." And Jardine, in his notes to Wilson, says that a clergyman of Rotherham describes in an anonymous pamphlet their assembling (in the words of the pamphlet) "at the willow ground, on the banks of the canal, preparatory to their migration,"

early in September, 1815, daily increasing in numbers until there were tens of thousands. Divided into bands every morning and sought their food. They finally left R. the 7th October.

As I was paddling back at 6 A. M., saw, nearly half a mile off, a blue heron standing erect on the topmost twig of the great buttonwood on the street in front of Mr. Prichard's house, while perhaps all within were abed and asleep. Little did they think of it, and how they were presided over. He looked at first like a spiring twig against the sky, till you saw him flap his wings. Presently he launched off and flew away over Mrs. Brooks's house.

It seems that I used to tie a regular granny's knot in my shoe-strings, and I learned of myself — rediscovered — to tie a true square knot, or what sailors sometimes call a reef-knot. It needed to be as secure as a reef-knot in any gale, to withstand the wringing and twisting I gave it in my walks.

The common small violet lespedeza out, elliptic-leaved, one inch long. The small white spreading polygala, twenty rods behind Wyman site, some time. Very common this year.

It is the wet season, and there is a luxuriant dark foliage. Hear a yellow-legs flying over, — *phe' phe phe, phe' phe phe.*

8 P. M. — On river to see swallows.

At this hour the robins fly to high, thick oaks (as this swamp white oak) to roost for the night. The wings of the chimney swallows flying near me make a whis-

tling sound like a duck's. Is not this peculiar among the swallows? They flutter much for want of tail. I see martins about. Now many swallows in the twilight, after circling eight feet high, come back two or three hundred feet high and then go down the river.

Aug. 6. P. M. — Down river to Tarbell Hill with C. Saw a *Sternothærus odoratus*, caught by the neck and hung in the fork between a twig and main trunk of a black willow, about two feet above water, — apparently a month or two, being nearly dry. Probably in its haste to get down had fallen and was caught. I have noticed the same thing once or twice before. Hear the autumnal crickets.

At Ball's Hill see five summer ducks, a brood now grown, feeding amid the pads on the opposite side of the river, with a whitish ring, perhaps nearly around neck. A rather shrill squeaking quack when they go off. It is remarkable how much more game you will see if you are in the habit of *sitting* in the fields and woods. As you pass along with a noise it hides itself, but presently comes forth again.

The *Ludwigia sphærocarpa* out maybe a week. I was obliged to wade to it all the way from the shore, the meadow-grass cutting my feet above and making them smart. You must wear boots here. The lespedeza with short heads, how long? These great meadows through which I wade have a great abundance of hedge-hyssop now in bloom in the water. Small St. John's-worts and elodeas, lanceolate loosestrife, arrow-

heads, small climbing bellflower, also horse-mint on the drier clods. These all over the meadow.

I see seven or eight nighthawks together; dull-buff breasts, with tails short and black beneath. The mole cricket creaks along the shore.

Meadow-haying on all hands.

Aug. 7. To Tarbell Hill again with the Emersons, a-berrying.

Very few berries this year.

Aug. 8. Blue-curls, how long? Not long.

Aug. 9. Elecampane, apparently several days. River is risen and fuller, and the weeds at bathing-place washed away somewhat. Fall to them.

Dana says a sprit is the diagonal boom or gaff, and hence a spritsail. Most fore-and-aft sails have a gaff and boom.

Aug. 10. P. M. — To Nagog.

Middle of huckleberrying.

Aug. 19. See painted tortoise shedding scales, — half off and loose.[1]

Aug. 22. I hear of some young barn swallows in the nest still in R. Rice's barn, Sudbury.

Aug. 24. Scare up a pack of grouse.

[1] Again Sept. 10 and 15.

Aug. 25. In Dennis's field this side the river, I count about one hundred and fifty cowbirds about eight cows, running before their noses and in odd positions, awkwardly walking with a straddle, often their heads down and tails up a long time at once, occasionally flying to keep up with a cow, over the heads of the others, and following off after a single cow. They keep close to the cow's head and feet, and she does not mind them; but when all went off in a whirring (rippling?) flock at my approach, the cow (about whom they were all gathered) *looked off after them* for some time, as if she felt deserted.

Aug. 29. Saw two green-winged teal, somewhat pigeon-like, on a flat low rock in the Assabet.

Aug. 31. First frost in our garden. Passed in boat within fifteen feet of a great bittern, standing perfectly still in the water by the riverside, with the point of its bill directly up, as if it knew that from the color of its throat, etc., it was much less likely to be detected in that position, near weeds.

XIII

SEPTEMBER, 1855

(ÆT. 38)

Sept. 2. Small locusts touched by frost, probably of the 31st August; nothing else in the woodland hollows.

Sept. 5. *Wednesday.* A stream of black ants a sixth of an inch long in the steep path beyond the Springs, some going, others returning, diagonally across the path two rods, and an inch or more wide, their further course obscured by leaves in the woods.

Sept. 10. I can find no trace of the tortoise-eggs of June 18, though there is no trace of their having been disturbed by skunks. They must have been hatched earlier. C. says he saw a painted tortoise a third grown, with a freshly killed minnow in his mouth as long as himself, eating it.

Thinking over the tortoises, I gave these names: rough tortoise, scented ditto, vermilion (rainbow, rail?), yellow box, black box, and yellow-spotted.

Sept. 11. Loudly the mole cricket creaks by mid-afternoon. Muskrat-houses begun.

Sept. 12. A few clams freshly eaten. Some grapes ripe.

Sept. 14. P. M. — To Hubbard's Close.

I scare from an oak by the side of the Close a young hen-hawk, which, launching off with a scream and a heavy flight, alights on the topmost plume of a large pitch pine in the swamp northward, bending it down, with its back toward me, where it might be mistaken for a plume against the sky, the light makes all things so black. It has a red tail; black primaries; scapulars and wing-coverts gray-brown; back showing much white and whitish head. It keeps looking round, first this side then that, warily.

I see no fringed gentian yet.

It costs so much to publish, would it not be better for the author to put his manuscripts in a safe?

Sept. 15. P. M. — Up Assabet.

See many painted tortoise scales being shed, half erect on their backs. An *Emys insculpta* which I mistook for dead, under water near shore; head and legs and tail *hanging down straight.* Turned it over, and to my surprise found it coupled with another. It was at first difficult to separate them with a paddle. I see many scales from the sternum of tortoises.

Three weeks ago saw many brown thrashers, catbirds, robins, etc., on wild cherries. They are worth raising for the birds about you, though objectionable on account of caterpillars.

Sept. 16. As I go up the Walden road, at Breed's, Hubbard, driving his cows through the weed-field, scares a woodchuck, which comes running through

the wall and down the road, quite gray, and does not see me in the road a rod off. He stops a rod off when I move in front of him. Short legs and body flat toward the ground, *i. e.* flattened out at sides.

Sept. 19. Up Assabet.

Do I see wood tortoises on this branch only? About a week since, Mr. Thurston told me of his being carried by a brother minister to hear some music on the shore of a pond in Harvard, produced by the lapse of the waves on some stones.

Sept. 20. First decisive frost, killing melons and beans, browning button-bushes and grape leaves.

P. M. — Up main stream.

The great bittern, as it flies off from near the railroad bridge, filthily drops its dirt and utters a low hoarse *kwa kwa;* then runs and hides in the grass, and I land and search within ten feet of it before it rises. See larks in flocks on meadow. See blackbirds (grackle or red-wing or crow blackbird?).

Tried to trace by the sound a mole cricket, — thinking it a frog, — advancing from two sides and looking where our courses intersected, but in vain.

Opened a new and pretty sizable muskrat-house with no hollow yet made in it. Many tortoise-scales upon it. It is a sort of tropical vegetation at the bottom of the river. The palm-like potamogeton, — or ostrich-plumes.

Sept. 21. Stopped at the old Hunt house with Ricket-

son and C. The rafters are very slender, of oak, yet quite sound; the laths of split cedar (?), yet long and straight and as thin or thinner than our sawed ones. Between the boards and plastering, in all the lower story, at least, large-sized bricks are set on their edges in clay. Was it not partly to make it bullet-proof? They had apparently been laid from within after boarding, — from the fresh marks of the boards on the clay. An Egyptian-shaped fireplace or frame in the chamber and painted or spotted panels to the door. Large old-fashioned latches and bolts, blacksmith-made? The upper story projects in front and at ends seven or eight inches over the lower, and the gables above a foot over this. No weather-boards at the corners.

Sept. 22. Many tortoise-scales about the river now. Some of my driftwood — floating rails, etc. — are scented with muskrats; have been their perches; and also covered with a thick clear slime or jelly.

Sept. 23. Small sparrows, with yellow on one side above eye in front and white belly, erectile (?) crown divided by a light line. Those weeds, etc., on the bared meadow come up spontaneously.

8 P. M. — I hear from my chamber a screech owl about Monroe's house this bright moonlight night, — a loud, piercing scream, much like the whinner of a colt perchance, a rapid trill, then subdued or smothered a note or two.

A little wren-like (or female goldfinch) bird on a

willow at Hubbard's Causeway, eating a miller; with bright-yellow rump when wings open, and white on tail. Could it have been a yellow-rump warbler?

Sept. 24. P. M. — Up river to Conantum with C.

A very bright and pleasant fall day. The button-bushes pretty well browned with frost (though the maples are but just beginning to blush), their pale-yellowish season past. Nowadays remark the more the upright and fresh green phalanxes of bulrushes when the pontederias are mostly prostrate. The river is perhaps as low as it has been this year. Hardly can I say a bird sings, except a slight warble, perhaps, from some kind of migrating sparrow. Was it a tree sparrow, not seen?[1] The slender white spikes of the *Polygonum hydropiperoides* and the rose-colored ones of the front-rank kind, and rarely of the *P. amphibium*, look late and cool over the water. See some kalmiana lilies still freshly bloomed.

Above the Hubbard Bridge we see coming from the south in loose array some twenty apparently black ducks, with a silveriness to the under sides of their wings in the light. At first they were in form like a flock of blackbirds, then for a moment assumed the outline of a fluctuating harrow.

Some still raking, others picking, cranberries.

I suppose it was the solitary sandpiper (*Totanus solitarius*) which I saw feeding at the water's edge on Cardinal Shore, like a snipe. It was very tame; we did not scare it even by shouting. I walked along

[1] Probably a song sparrow.

the shore to within twenty-five feet of it, and it still ran toward me in feeding, and when I flushed it, it flew round and alighted between me and C., who was only three or four rods off. It was about as large as a snipe; had a bluish dusky bill about an inch and a quarter long, apparently straight, which it kept thrusting into the shallow water with a nibbling motion, a perfectly white belly, dusky-green legs; bright brown and black above, with duskier wings. When it flew, its wings, which were uniformly dark, hung down much, and I noticed no white above, and heard no note.

Brought home quite a boat-load of fuel, — one oak rail, on which fishers had stood in wet ground at Bittern Cliff, a white pine rider (?) with a square hole in [it] made by a woodpecker anciently, so wasted the sap as to leave the knots projecting, several chestnut rails; and I obtained behind Cardinal Shore a large oak stump which I know to have been bleaching there for more than thirty years, with three great gray prongs sprinkled with lichens. It bore above the marks of the original burning. There was a handful of hazel-nuts under it emptied by the ground (?) squirrel, a pretty large hole in the rough and thin stem end of each, where the bur was attached. Also, at Clam-shell Hill Shore, a chestnut boat-post with a staple in it, which the ice took up last winter, though it had an arm put through it two feet underground. Some much decayed perhaps old red maple stumps at Hubbard's Bath Place. It would be a triumph to get all my winter's wood thus. How much better than to buy a

cord coarsely from a farmer, seeing that I get my money's worth! Then it only affords me a momentary satisfaction to see the pile tipped up in the yard. Now I derive a separate and peculiar pleasure from every stick that I find. Each has its history, of which I am reminded when I come to burn it, and under what circumstances I found it. Got home late. C. and I supped together after our work at wooding, and talked it over with great appetites.

Dr. Aikin, in his "Arts of Life," says that "the acorns of warm climates are fit for human food."

Sept. 25. A very fine and warm afternoon after a cloudy morning. Carry Aunt and Sophia a-barberrying to Conantum. Scare up the usual great bittern above the railroad bridge, whose hoarse *qua qua*, as it flies heavily off, a pickerel-fisher on the bank imitates. Saw two marsh hawks skimming low over the meadows and another, or a hen-hawk, sailing on high.

Saw where the moles had been working in Conant's meadow, — heaps of fresh meadow mould some eight inches in diameter on the green surface, and now a little hoary.

We got about three pecks of barberries from four or five bushes, but I filled my fingers with prickles to pay for them. With the hands well defended, it would be pleasant picking, they are so handsome, and beside are so abundant and fill up so fast. I take hold the end of the drooping twigs with my left hand, raise them, and then strip downward at once as many clusters as my hand will embrace, commonly bring-

ing away with the raceme two small green leaves or bracts, which I do not stop to pick out. When I come to a particularly thick and handsome wreath of fruit, I pluck the twig entire and bend it around the inside of the basket. Some bushes bear much larger and plumper berries than others. Some also are comparatively green yet. Meanwhile the catbird mews in the alders by my side, and the scream of the jay is heard from the wood-side.

When returning, about 4.30 P. M., we observed a slight mistiness, a sea-turn advancing from the east, and soon after felt the raw east wind, — quite a contrast to the air we had before, — and presently all the western woods were partially veiled with the mist. Aunt thought she could smell the salt marsh in it. At home, after sundown, I observed a long, low, and uniformly level slate-colored cloud reaching from north to south throughout the western horizon, which I supposed to be the sea-turn further inland, for we no longer felt the east wind here.

In the evening went to Welch's (?) circus with C. Approaching, I perceived the peculiar scent which belongs to such places, a certain sourness in the air, suggesting trodden grass and cigar smoke. The curves of the great tent, at least eight or ten rods in diameter, — the main central curve and wherever it rested on a post, — suggested that the tent was the origin of much of the Oriental architecture, the Arabic perhaps. There was the pagoda in perfection. It is remarkable what graceful attitudes feats of strength and agility seem to require.

Sept. 26. Went up Assabet for fuel. One old piece of oak timber looks as if it had been a brace in a bridge. I get up oak rails here and there, almost as heavy as lead, and leave them to dry somewhat on the bank. Stumps, partially burned, which were brought by the freshet from some newly cleared field last spring; bleached oak trees which were once lopped for a fence; alders and birches which the river ice bent and broke by its weight last spring. It is pretty hard and dirty work. It grieves me to see how rapidly some great trees which have fallen or been felled waste away when left on the ground. There was the large oak by the Assabet, which I remember to have been struck by lightning, and afterward blown over, being dead. It used to lie with its top down-hill and partly in the water and its butt far up. Now there is no trace of its limbs, and the very core of its trunk is the only solid part, concealed within a spongy covering. Soon only a richer mould will mark the spot.

Sept. 27. Collecting fuel again this afternoon, up the Assabet.

Yesterday I traced the note of what I have falsely thought the *Rana palustris*, or cricket frog, to its true source. As usual it sounded loud and incessant above all ordinary crickets and led me at once to a bare and soft sandy shore. After long looking and listening, with my head directly over the spot from which the sound still came at intervals (as I had often done before), I concluded, as no creature was visible, that it must issue from the mud, or rather slimy sand. I noticed that the

shore near the water was upheaved and cracked as by a small mole-track and, laying it open with my hand, I found a *mole cricket* (*Gryllotalpa brevipennis*). Harris says that their burrows "usually terminate beneath a stone or clod of turf." They live on the roots of grass and other vegetables, and in Europe the corresponding species does a great deal of harm. They "avoid the light of day, and are active chiefly during the night." Have their burrows "in moist and soft ground, particularly about ponds." "There are no house crickets in America."

Among crickets "the males only are musical." The "shrilling" is produced by shuffling their wing-covers together lengthwise. French call crickets *cri-cri*. Most crickets die on approach of winter, but a few survive under stones.

See furrows made by many clams now moving into deep water.

Some single red maples now fairly make a show along the meadow. I see a blaze of red reflected from the troubled water.

Sept. 29. Go to Daniel Ricketson's, New Bedford.

At Natural History Library saw Dr. Cabot, who says that he has heard either the hermit, or else the olivaceous, thrush sing, — very like a wood thrush, but softer. Is sure that the hermit thrush sometimes breeds hereabouts.

De Kay, in the New York Reports, thus describes the blackfish:[1] —

[1] [The quotation is somewhat abridged.]

"FAMILY DELPHINIDÆ.
Genus *Globicephalus*. Lesson.
The Social Whale.
Globicephalus melas.
Delphinus melas. Trail, Nicholson's Journal.
D. globiceps. Cuvier, Mem. Mus. Vol. 19.
D. deductor. Scoresby, Arct. Regions.
D. intermedius. Harlan.
Phocena globiceps. Sampson, Am. Journal."

"Length 15 to 20 feet;" "shining, bluish black above;" a narrow light-gray stripe beneath; "remarkable for its loud cries when excited."

"Black Whale-fish," "Howling Whale," "Social Whale," and "Bottle-head." [1] Often confounded with the grampus. Not known why they are stranded. In 1822 one hundred stranded in one herd at Wellfleet. First described in a History of Greenland. In the Naturalists' Library, Jardine, I find *Globicephalus deductor* or *melas*, "The Deductor or Ca'ing Whale." First *accurately* described by Trail in 1809. Sixteen to twenty-four feet long. In 1799 two hundred ran ashore on one of the Shetland Isles. In the winter of 1809–10, one thousand one hundred and ten "approached the shore of Hvalfiord, Iceland, and were captured." [2] In 1812 were used as food by the poor of Bretagne.[3] They visit the neighborhood of Nice in May and June.

Get out at Tarkiln Hill, or Head of the River Station, three miles this side of New Bedford. Recognized an old Dutch barn. R.'s sons Arthur and Walter were

[1] [*Cape Cod*, p. 142; Riv. 170.] [2] [*Cape Cod*, p. 146; Riv. 174.]
[3] [*Cape Cod*, p. 144; Riv. 171.]

just returning from tautog-fishing in Buzzard's Bay, and I tasted one at supper. Singularly curved from snout to tail.[1]

Sept. 30. *Sunday.* Rode with R. to Sassacowens Pond, in the north part of New Bedford on the Taunton road, called also Toby's Pond, from Jonathan Toby, who lives close by, who has a famous lawsuit about a road he built to Taunton years ago, which he has not got paid for; in which suit, he told us, he had spent thirty thousand dollars; employed Webster. Toby said the pond was called from the last of the Indians who lived there one hundred or one hundred and fifty years ago, and that you can still see his cellar-hole, etc., on the west side of the pond. We saw floating in the pond the bottom of an old log canoe — the sides rotted off — and some great bleached trunks of trees washed up. Found two quartz arrowheads on the neighboring fields. Noticed the ailanthus, or trees of heaven, about Toby's house, giving it a tropical look.

Thence we proceeded to Long Pond, stopping at the south end, which is in Freetown, about eight miles from R.'s. The main part is in Middleborough. It is about four (a man near by said five) miles long by seven eighths wide, measuring on the map of Middleborough and of the State, and fifteen feet deep, or twenty [in] some places, with at least three islands in it. This and the neighboring ponds were remarkably low. We first came out on to a fine, soft, white sandy beach,

[1] [*Daniel Ricketson and his Friends*, p. 337.]

two rods wide, near the southeast end, and walked westerly. It was very wild, and not a boat to be seen. The sandy bottom in the shallow water from the shore to three or four rods out, or as far as we could see, was thickly furrowed by clams, chiefly the common unio, and a great many were left dead or dying, high and dry, within a few feet of the water. These furrows, with each its clam at the end, though headed different ways, — all ways, — described various figures on the bottom; some pretty perfect circles, figure 6's and 3's, whip-lashes curling to snap, bow-knots, serpentine lines, and often crossing each other's tracks like the paths of rockets or bombshells. I never saw these furrows so numerous. Soon we came to a stony and rocky shore abutting on a meadow fringed with wood, with quite a primitive aspect. With the stones the clams ceased. Saw two places where invisible inhabitants make fires and do their washing on the shore, — some barrels or firkins, etc., still left. Some of the rocks at high-water mark were very large and wild, which the water had undermined on the edge of the woods. Here, too, were some great bleached trunks of trees, high and dry. Saw a box tortoise which had been recently killed on the rocky shore.

After walking in all about a third or half a mile, came again to a sandy shore, where the sand-bars lately cast up and saturated with water sank under us. There we saw, washed up dead, a great pickerel twenty-three inches long (we marked it on a cane), and there was projecting from its mouth the tail of another pickerel. As I wished to ascertain the size of the last, but could

not pull it out, — for I found it would part first at the tail, it was so firmly fixed, — I cut into the large one, though it was very offensive, and found that the head and much more was digested and that the smaller fish had been at least fifteen inches long. The big one had evidently been choked by trying to swallow too large a mouthful. Such was the penalty it had paid for its voracity. There were several suckers and some minnows also washed up near by.

They get no iron from these ponds now.

Went to a place easterly from the south end of this pond, called Joe's Rock, just over the Rochester line, where a cousin of Marcus Morton told us that one Joe Ashly secreted himself in the Revolution amid the fissures of the rocks, and, being supplied with food by his friends, could not be found, though he had enlisted in the army.

Returning, we crossed the Acushnet River where it took its rise, coming out of a swamp. Looked for arrowheads in a field where were many quahog, oyster, scallop, clam, and winkle (*Pyrula*) shells, probably brought by the whites, four or five miles, from the salt water. Also saw these in places which Indians had frequented.

Went into an old deserted house, the Brady house, where two girls who had lived in the family of R. and his mother had been born and bred, their father Irish, their mother Yankee. R. said that they were particularly bright girls and lovers of nature; had read my "Walden." Now keep school. Have still an affection for their old house. We visited the spring they had

used. Saw the great willow tree at the corner of the house, in which one of the girls, an infant in the cradle, thought that the wind began as she looked out the window, and heard the wind sough through it. Saw how the chimney in the garret was eked out with flat stones, bricks being dear.

Arthur Ricketson showed me in his collection what was apparently (?) an Indian mortar, which had come from Sampson's in Middleborough. It was a dark granite-like stone, some ten inches long by eight wide and four thick, with a regular round cavity worn in it four inches in diameter and one and one half deep, also a smaller one opposite on the other side.

He also showed me the perfect shell of an *Emys guttata*, with some of the internal bones, which had been found between the plastering and boarding of a meeting-house at the Head of the River (in New Bedford), which was seventy-five or eighty years old and was torn down fifteen or twenty years ago. Supposed to have crawled in when the meeting-house was built, though it was not very near water. It had lost no scales, but was bleached to a dirty white, sprinkled with spots still yellow.[1]

[1] [*Daniel Ricketson and his Friends*, pp. 337–340.]

XIV

OCTOBER, 1855

(ÆT. 38)

Oct. 1. Among R.'s books is Bewick's "Æsop's Fables." On a leaf succeeding the title-page is engraved a facsimile of B.'s handwriting to the following effect:

"Newcastle, January, 1824.

To Thomas Bewick & Son Dr.

	£	s	d
To a Demy Copy of Æsop's Fables	"	18	"

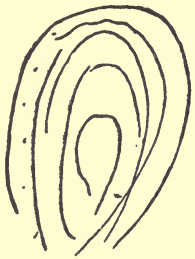
Received the above with thanks

Thomas Bewick Robert Elliot Bewick."

Then there was some fine red sea-moss adhering to the page just over the view of a distant church and windmill (probably Newcastle) by moonlight, and at the bottom of the page: —

"No. 809

Thomas Bewick

his  mark"

It being the impression of his thumb.[1]

[1] [An inky thumb-mark, doubtless Thoreau's own, precedes this rude sketch.]

A cloudy, somewhat rainy day. Mr. R. brought me a snail, apparently *Helix albolabris*, or possibly *thyroidus*, which he picked from under a rock where he was having a wall built. It had put its stag- or rather giraffe-like head and neck out about two inches, the whole length to the point behind being about three, — mainly a neck of a somewhat buffish-white or grayish-buff color or buff-brown, shining with moisture, with a short head, deer-like, and giraffe-like horns or tentacula on its top black at tip, five eighths of an inch long, and apparently two short horns on snout. Its neck, etc., flat beneath, by which surface it draws or slides itself along in a chair. It is surprisingly long and large to be contained in that shell, which moves atop of it. It moves at the rate of an inch or half an inch a minute over a level surface, whether horizontal or perpendicular, and holds quite tight to it, the shell like a whorled dome to a portion of a building. Its foot (?) extends to a point behind. It *commonly* touches by an inch of its flat under side, flatting out by as much of its length as it touches. Shell rather darker mottled (?) than body. The tentacula become all dark as they are drawn in, and it can draw them or contract them straight back to naught. No *obvious* eyes (?) or mouth.

P. M. — Rode to New Bedford and called on Mr. Green, a botanist, but had no interview with him. Walked through Mrs. Arnold's arboretum. Rode to the beach at Clark's Cove where General Gray landed his four thousand troops in the Revolution. Found there in abundance *Anomia ephippium* (?), their ir-

regular golden-colored shells; *Modiola plicatula* (rayed mussel); *Crepidula fornicata* (?), worn; *Pecten concentricus*, alive; and one or two more.

Returned by the new Point road, four miles long, and R. said eighty feet wide (I should think from recollection more), and cost $50,000. A magnificent road, by which New Bedford has appropriated the sea. Passed salt works still in active operation, windmills going; a series of frames, with layers of bushes one above another to a great height, apparently for filtering. Went into a spermaceti candle and oil factory.

Arthur R. has a soapstone pot (Indian), about nine inches long, more than an inch thick, with a kind of handle at the ends, — or protuberances.[1] A. says he uses fresh-water clams for bait for perch, etc., in ponds. I think it was to-day some one saw geese go over here, so they said.

Oct. 2. A cloudy day. Rode to "Sampson's" in Middleborough, thirteen miles. Many quails in road. Passed over a narrow neck between the two Quitticus ponds, after first visiting Great Quitticus on right of road and gathering clamshells there, as I had done at Long Pond and intend to do at Assawampsett. These shells labelled will be good mementos of the ponds. It was a great, wild pond with large islands in it.

Saw a loon on Little or West Quitticus from road, an old bird with a black bill. The bayonet or rainbow rush was common along the shore there.

[1] [*Daniel Ricketson and his Friends*, pp. 341, 342.]

In Backus's Account of Middleborough, Historical Collections, vol. iii, First Series: "Philip once sent an army to waylay Capt. Church in Assowamset Neck; which is in the south part of Middleborough." Perhaps this was it.

Just beyond this neck, by the roadside, between the road and West Quitticus Pond, is an old Indian burying-ground. R. thought it was used before the whites came, though of late by the "praying Indians." This was the old stage road from New Bedford to Boston. It occupies a narrow strip between the road and the pond, about a dozen rods wide at the north end, and narrower at the south, and is thirty or forty feet above the water. Now covered with a middling growth of oak, birch, hickory, etc. Chestnut oaks (perhaps *Quercus montana*) grow near there. I gathered some leaves and one large acorn, from the buggy.

There were two stones with inscriptions. R. copied one as follows: —

In memory of Jean Squeen
who died April 13th 1794 in
her 23 year. Also of Benj^{a}
who died at sea April 22 1799
in his 26th year children of
Lydia Squeen a native[1]
When earth was made when time began
Death was decreed the fate of man

The purport of the other was that Lydia Squeen died in 1812, aged seventy-five. The other graves were only faintly marked with rough head and foot stones. All amid the thick wood. There were one or

[1] [*Daniel Ricketson and his Friends*, pp. 343, 344.]

two graves without any stones, apparently not more than five or six years old.

We soon left the main road and turned into a path on the right, leading to Assawampsett Pond, a mile distant. There, too, was a fine sandy beach, the south shore of the pond, three or four rods wide. We walked along the part called Betty's Neck. This pond is, by the map of Middleborough, a little more than three miles long in a straight line northwest and southeast across Pocksha, and nearly two wide. We saw the village of Middleborough Four Corners far across it, yet no village on the shore. As we walked easterly, the shore became stony. On one large slate (?) rock with a smooth surface, sloping toward the pond at high-water mark, were some inscriptions or sculptures which R. had copied about ten years since, thus: —

1749 B. Hill Israel felix

The "B. Hill" is comparatively modern. R. said that Israel Felix was an old Indian preacher. According to Backus in Historical Collections, vol. iii, First Series, Thomas Felix was an Indian teacher in Middleborough once. The foot appeared very ancient, though pecked in about half an inch. It has squarish form and broad at the toes, like the representation of some sculptured in stone at the West. For a long time we could discern only 1749 and B. Hill. At length we detected the foot, and after my companion had given up, concluding that the water and the ice had obliterated the rest within ten years, I at last rather felt with my fingers

than saw with my eyes the faintly graven and lichen-covered letters of Israel Felix's name. We had looked on that surface full fifteen minutes in vain, yet I felt out the letters after all with certainty.

In a description of Middleborough in the Historical Collections, vol. iii, 1810, signed "Nehemiah Bennet, Middleborough, 1793," it is said, "There is on the easterly shore of Assawampsitt Pond, on the shore of Betty's-neck, two rocks which have curious marks thereon (supposed to be done by the Indians) which appear like the steppings of a person with naked feet, which settled into the rocks; likewise the prints of a hand on several places, with a number of other marks; also, there is a rock on a high hill, a little to the eastward of the old stone fishing wear, where there is the print of a person's hand in said rock." [1]

Perhaps we might have detected more on these same rocks, had we read this before, for we saw that there was something on the next rock. We did not know of the "wear."

The same writer speaks of a settlement of Indians at "Betty's-neck (which place took its name from an ancient Indian woman by the name of Betty Sasemore, who owned that neck) where there is now eight Indian houses and eight families," between thirty and forty souls.

I was interested by some masses of puddingstone further along the shore. There were also a few large flat, sloping slate (?) rocks. I saw a small *Emys picta;* and a young snapping turtle, apparently hatched this

[1] [*Familiar Letters*, pp. 264, 265; Riv. 313.]

summer, the *whole* length when swimming about three inches. It was larger than mine last April and had ten very distinct points to its shell behind. I first saw it in the water next the shore. The same Bennet quoted above adds in a postscript: —

"In the year 1763, Mr. Shubael Thompson found a land turtle in the north-east part of Middleborough, which by some misfortune had lost one of its feet, and found the following marks on its shell, viz. I. W. 1747. He marked it S. T. 1763, and let it go. It was found again in the year 1773, by Elijah Clap, who marked it E. C. 1773, and let it go. It was found again in the year 1775, by Captain William Shaw, in the month of May, who marked it W. S. 1775. It was found again by said Shaw the same year, in September, about one hundred rods distance from the place where he let it go.

"It was found again in the year 1784, by Jonathan Soule, who marked it J. S. 1784, and let it go. It was found again in the year 1790, by Joseph Soule, who marked it J. S. 1790, and let it go. It was found again in the year 1791, by Zenas Smith, who marked it Z. S. 1791, and let it go; it being the last time it was found; 44 years from the time the first marks were put on."

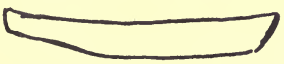
We saw five loons diving near the shore of Betty's Neck, which, instead of swimming off, approached within ten rods as if to reconnoitre us. Only one had a black bill, and that not entirely so; another's was turning. Their throats were all very white. I was surprised to see the usnea hanging *thick* on many apple

trees and some pears in the neighborhood of this and the other ponds, as on spruce. Sheep are pastured hereabouts.

Returning along the shore, we saw a man and woman putting off in a small boat, the first we had seen. The man was black. He rowed, and the woman steered. R. called to them. They approached within a couple of rods in the shallow water. "Come nearer," said R. "Don't be afraid; I ain't a-going to hurt you." The woman answered, "I never saw the man yet that I was afraid of." The man's name was Thomas Smith, and, in answer to R.'s very direct questions as to how much he was of the native stock, said that he was one-fourth Indian. He then asked the woman, who sat unmoved in the stern with a brown dirt-colored dress on, a regular countrywoman with half an acre of face (squaw-like), having first inquired of Tom if she was his woman, how much Indian blood she had in her. She did not answer directly so home a question, yet at length as good as acknowledged to one-half Indian, and said that she came from Carver, where she had a sister; the only half-breeds about here. Said her name was Sepit, but could not spell it. R. said, "Your nose looks rather Indiany." Where will you find a Yankee and his wife going a-fishing thus? They lived on the shore. Tom said he had seen turtles in the pond that weighed between fifty and sixty; had caught a pickerel that morning that weighed four or five pounds; had also seen them washed up with another in their mouths.

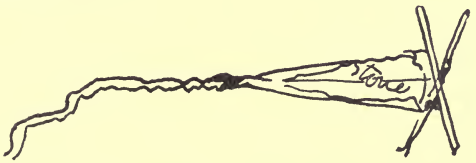
Their boat was of peculiar construction, and T. said

it was called a sharper [*sic*]; [1] with very high sides and a remarkable run on the bottom aft, and the bottom boards were laid across, coming out flush, and the sides set on them. An ugly model.[2]



Tom said that Assawampsett was fifteen to twenty feet deep in deepest part. A Mr. Sampson, good authority, told me nine or ten on an average, and the deepest place said to be thirty or more.

R. told the squaw that we were interested in those of the old stock, now they were so few. "Yes," said she, "and you 'd be glad if they were all gone." This boat had a singular "wooden grapple," as Tom called it, made in form of a cross, thus: with a stone within.



The stones on which we walked about all the ponds were covered, now the water was low, with a hoary sort of moss which I do not remember to have seen in Concord; very fine and close to the rock.

Great shallow lakes, the surrounding country hardly rising anywhere to more than a hundred feet above them. According to Bourne's map there are in Middleborough: —

[1] [Probably a sharp, or sharpie, a boat used by oystermen.]

[2] [*Daniel Ricketson and his Friends*, pp. 344–348.]

57,937½	acres of land	
5,250	" "	water
63,187½	total	

Backus says that iron was discovered at the bottom of Assawampsett Pond about 1747. (Historical Collections, vol. iii, First Series.) "Men go out with boats, and make use of instruments much like those with which oysters are taken, to get up the ore from the bottom of the pond." "It became the main ore that was used in the town." Once one man got two tons a day; in 1794, half a ton. Yet there was then (in 1794) plenty of it in an adjacent pond which was twenty feet deep. Much of it was better than the bog ore they had been using. Dr. Thatcher says that Assawampsett Pond once afforded annually six hundred tons of ore. A man afterward discovered it in a pond in Carver, by drawing up some with a fish-line accidentally, and it was extensively used. I did not hear of any being obtained now.

There were three Praying Indian villages in Middleborough — Namassekett, Assawomsit, and Ketchiquut (Titicut), — the last in the northwest part, on Taunton River, where was an Indian weir. Winslow and company on a visit to Massasoit in June, 1621, stopped at Nemasket, fifteen miles, the first night before "conceived by us to be very near, because the inhabitants flocked so thick upon every slight occasion amongst us," etc., etc., *q. v.*

R. is a man of feeling. As we were riding by a field in which a man was shackling a sheep, which struggled,

R. involuntarily shouted to him and asked, "What would you do?"

We left our horse and buggy at John Kingman's and walked by Sampson's to a hill called King Philip's Lookout, from which we got a good view of Assawampsett and Long Ponds. There was a good-sized sailboat at Sampson's house, now kept by a Barrows. The shores were now surrounded with pale wine-colored foliage, of maples, etc., and inland were seen the very *fresh* green and yellow of pines, contrasting with the red (*Rubus*) blackberry. The highest land appears to be about the northwest end of the ponds.

I saw at Kingman's long-handled but small scoop nets for taking young alewives for pickerel bait. They think the white perch one of the best fish, like a cod.

Elder's Pond, a little further north, is said to be the deepest and clearest.[1] Walking along the north end of Long Pond, while R. bathed, I found amid the rainbow rush, pipewort (*Eriocaulon*), etc., on the now broad flat shore, a very beautiful flower, pinkish rose-color, new to me, and still quite fresh, the *Sabbatia chloroides*, referred to Plymouth; ten stamens and petal divisions, about one foot high. I also observed there the very broad and distinct trail of an otter in the wet sand, to and from the water, with the mark of its tail, though Kingman did not know of any now hereabouts.

The arrowheads hereabouts are commonly white quartz.

R. says "gamble-roof." This should be "gambrel,"

[1] Not so deep as said.

apparently from the hind leg of a horse, — crooked like it.

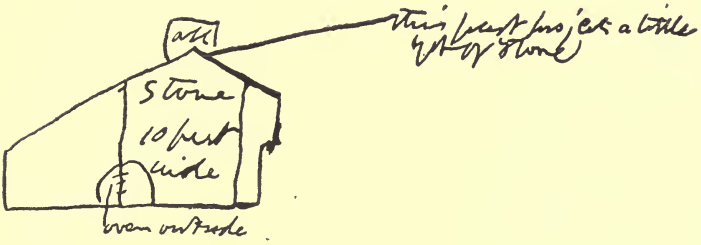
Oct. 3. Copied the map of Middleborough.

Somewhat rainy. Walked along shore of Acushnet looking for shells. R. pointed out to me the edible mushroom, which he says he loves raw even. It is common. The shore was all alive with fiddler crabs, carrying their fiddles on one side, and their holes, nearly an inch over, were very common and earth heaped up. The samphire was turned red in many places, yielding to the autumn. Atkinson, in his Siberian and steppe travels, speaks of the "Salsola plant" turned a bright crimson. On the Kirghis Steppes, he says, "in the distance I could see salt lakes: I knew them to be salt by the crimson margins which encircled them." (Page 425.)

Got some quahogs and *Modiola plicatula* (rayed mussel); the last was very abundant; also some pyrulas, which are dug up alive by sand [?]-diggers. Gathered there apparently wild germander (*Teucrium*), out of bloom, and *Iva frutescens*, or high-water shrub, ditto. Sailed back up the river in Arthur's whale-boat with three sails. Her side drank water through a crack. He gave three dollars for her and spent ten more in repairs. Twenty feet long, and worth originally perhaps $75. If I had stayed longer we should probably have gone to Cuttyhunk in this.

P. M. — Rode to see some old houses in Fairhaven, etc., etc. How beautiful the evergreen leaf of the *Prinos glaber*, slightly toothed toward end!

The old Woods place, a quarter of a mile off the road, looked like this:—



The end showed the great stone chimney, all stone to top, except about hearth. The upper story overlapped about eighteen inches, with the ornamental points of timbers dropping from it. Above this, in front, the shingles were rounded, scale-like. There was one half of a diamond window left in front, set in lead, very thin lead, with a groove in each side for sash, and a narrow slit-window for firing through, also another on farther end. Chimney mortared. The old latch to front door was primitive, apparently made by village blacksmith.

Also an old house in the village of Fairhaven, said to have been standing in Philip's War; a small house, a ten-footer, with one end and chimney wholly of stone. The chimney quite handsome, of this form, looking down on it:

Visited the studio in Fairhaven of a young marine painter, built over the water, the dashing and gurgling of it coming up through a grating in the floor.

He was out, but we found there painting Van Best, a well-known Dutch painter of marine pieces whom he has attracted to him. He talked and looked particularly Dutchman-like. Then visited Fort Nobscot [1] on a rocky point.

Oct. 4. Rode to Westport, where R. wished to consult the Proprietors' Records of Dartmouth to find the names, etc., of his ancestors. Passed through Smith's Mills village, the older settlement in Dartmouth, on the stream which comes from Sassacowens Pond, then Westport, about three miles beyond, and crossed the Westport River to Gifford's, a mile beyond, where the Records were.

Returning, lunched by Westport Pond in Dartmouth, said to contain sixty acres but to [be] only about two feet deep. Saw a blue heron in it some rods from the shore, where the water did not come up to its body. Perhaps it might have waded anywhere in it. It stood with the *side* of its head towards us, being wary of us. When it moved, walked with a peculiar stooping and undulating gait in the water. At length thrust its bill in as if feeding. That must be a rare place for it to catch frogs and perhaps minnows in, though we were told that there [were] only turtles, snakes, and pouts in it.

The vanes on this ride were often a whale, rather a lumpish form, but reminding us that the farmer had, perhaps, been a whaler.

[1] [The fort at Fairhaven is called Fort Phœnix.]

Oct. 5. Rode to Plymouth with R., in his buggy. In the north part of Rochester, went into an old uninhabited house which once belonged to John Shearman. It had the date 1753 engraved on an oblong square stone in the stone chimney, though the chimney-top had been rebuilt with the old stone. The house had a singular musty scent when we opened it. The bare joists above in the kitchen all black with smoke. In the cellar grew the apple-of-Peru, *Nicandra physalodes*, then in bloom; a *short* datura-like blossom with a large fruit-like capsule.

After passing the Neck between the two Quitticus Ponds, we turned to the right and passed by the Point road between the Great Quitticus and Pocksha Ponds. This was a mere bar, half a mile long, two or three rods wide, and built up above high water with larger stones. We rode with one wheel in the water. There was in one place a stream crossing it and two or more bridges prepared for high water. Scared up five apparently black ducks. Continued on towards Carver by small winding country roads *via* where was once Nelson's meeting-house and along the east side of Tispaquin Pond, — this was the name of the old sachem of Nemasket, — near which in a field R. picked up a young *Emys picta's* (?) shell, which I have. Beyond this the country was almost uniformly level, sandy, — oak wood, with few dwellings. Lunched near the boundary of Carver. Passed Johns Pond and Wenham Pond and others in Carver, passing a mile or more south of Carver Green, and afterward Clear Pond in Plymouth. We heard the blasting at

the Quincy quarries (so Watson told us) during this ride, I think even as far back as New Bedford township, very distinctly.

According to Bennet, writing 1793 (*vide* Historical Collections), Snipatuet Pond in Rochester has one stream emptying into the sea at Mattapoisett Harbor and another, three quarters of a mile long, emptying into East Quitiquos Pond. "So that the alewife fish come into Snipatuet pond from both streams."

In a description of Carver in the Fourth Volume, Second Series, of the Historical Collections, I read: "The cast iron tea kettle was first cast at Plympton (now Carver) between 1760 and 1765. So modern is this very common utensil in New England. Wrought iron imported tea kettles were used before a copper tea kettle was first used at Plymouth, 1702." Also, "A place called 'Swan Holt' by the first planters, a little southeast of Wenham Pond, denotes the former visits of that bird, the earliest harbinger of spring; for before the ice is yet broken up, the swan finds an open resting place among the ozier holts, while the kildee, flying over the land from the sea shore, soon after confirms the vernal promise." A note adds: "A species of plover, probably the 'que ce qu'il dit' of the French. It may be added that kildee is the Danish word for a spring."

Lodged at Olney's (the old Hedge) House in Plymouth.

Oct. 6. Return to Concord *via* Natural History Library.

De Kay calls the pine marten the American sable.

Oct. 8. On river. — Flocks of tree sparrows by river, slightly warbling. Hear a song sparrow sing. See apparently white-throated sparrows hopping under covert of the button-bushes. Found my boat yesterday full of willow leaves after the rain. See no tortoises now on the rocks and boards. It is too cold.

Oct. 10. A young man has just shown me a small duck which he shot in the river from my boat. I thought it a blue-winged teal, but it has no distinct beauty-spot. The bill broad and, I should say from remembrance, bluish-black, as are the legs and feet, not red or yellow or flesh-color, webbed thus: Above black and brown with no bright colors or distinct white; neck brown beneath and breast; secondaries pale-bluish, tipped with white; a little greenish perhaps on the scapulars.

Mr. William Allen, now here, tells me that when, some years ago, a stream near his house in East Bridgewater, emptying into the Taunton River, was drained, he found a plant on the bottom very similar to a sponge — of the same form and color — and say six inches wide.

Oct. 12. P. M. — Up Assabet.

The leaves fallen apparently last night now lie thick on the water next the shore, concealing it, — fleets of dry boats, blown with a rustling sound.[1] I see a painted

[1] Probably maple chiefly, — the Leaf Harvest, call it.

tortoise still out on shore. Three of his back scales are partly turned up and show fresh black ones ready beneath. When I try to draw these scales off they tear first in my hand. They are covered, as are all the posterior ones, with a thick shaggy muddy fleece of moss (?). No wonder they must shed their scales to get rid of this. And now I see that the six main anterior scales have already been shed. They are fresh black and bare of moss. Apparently no fresh scales on the sternum. Is not this the only way they get rid of the moss, etc., which adhere to them?

Carried home a couple of rails which I fished out of the bottom of the river and left on the bank to dry about three weeks ago. One was a chestnut which I have noticed for some years on the bottom of the Assabet, just above the spring on the east side, in a deep hole. It looked as if it had been there a hundred years. It was so heavy that C. and I had as much as we could do to lift it, covered with mud, on to the high bank. It was scarcely lighter to-day, and I amused myself with asking several to lift one half of it after I had sawed it in two. They failed at first, not being prepared to find it so heavy, though they could easily lift it afterward. It was a regular segment of a log, and though the thin edge was comparatively firm and solid, the sap-wood on the broad and rounded side, now that it had been lying in the air, was quite spongy and had opened into numerous great chinks, five eighths of an inch wide by an inch deep. The whole was of a rusty brown externally, having imbibed some iron from the water. When split up it was of a dark blue

black, if split parallel with the layers, or alternately black and light brown, if split across them. There were concentric circles of black, as you looked at the end, coinciding nearly with the circles of pores, perhaps one sixteenth of an inch wide. When you looked at these on the side of a stick split across the circles, they reminded you of a striped waistcoat or sheepskin. But after being exposed to the air a little while, the whole turned to an almost uniform pale slate-color,[1] the light brown turning slate and the dark stripes also paling into slate. It had a strong dye-stuff-like scent, etc.

The other was a round oak stick, and, though it looked almost as old as the first, was quite sound even to the bark, and evidently quite recent comparatively, though full as heavy. The wood had acquired no peculiar color. Some farmers load their wood with gunpowder to punish thieves. There's no danger that mine will be loaded.

Pieces of both of these sank at once in a pail of water.[2]

Oct. 13. P. M. — To Conantum.

The maples now stand like smoke along the meadows. The bass is bare. A thick carpet of white pine needles lies now lightly, half an inch or more in thickness, above the dark-reddish ones of last year. Larks in flocks in the meadows, showing the white in their tails as they fly, sing sweetly as in spring. Methinks I have seen one or two myrtle-birds, sparrow-like.

[1] After a few weeks it became quite uniform.

[2] On the 18th they floated, after drying in my chamber.

Oct. 14. Some sparrow-like birds with yellow on rump flitting about our wood-pile. One flies up against the house and alights on the window-sill within a foot of me inside. Black bill and feet, yellow rump, brown above, yellowish-brown on head, cream-colored chin, two white bars on wings, tail black, edged with white, — the yellow-rump warbler or myrtle-bird without doubt. They fly to several windows, though it is not cold.

P. M. — Up Assabet.

The muskrats eat a good many clams now and leave their pearly shells open on the shore. Sometimes I find a little one which they have brought ashore in the night but left entire and alive. The green-rayed ones, — are they not a peculiar light blue within?

I still see the *Emys insculpta* coupled, the upper holding with its claws under the edge of the lower shell.

Oct. 15. P. M. — Go to look for white pine cones, but see none.

Saw a striped squirrel on a rail fence with some kind of weed in his mouth. Was it milkweed seed? At length he scud swiftly along the middle rail past me, and, instead of running over or around the posts, he glided through the little hole in the post left above the rails, as swiftly as if there had been no post in the way. Thus he sped through five posts in succession in a straight line, incredibly quick, only stooping and straightening himself at the holes.

The hornets' nests are exposed, the maples being bare, but the hornets are gone. I see one a very per-

fect cone, like a pitch pine cone, uninjured by the birds, about twelve feet from the ground, by a swamp, three feet from the end of a maple twig and upheld by it alone passing through its top, about an inch deep, seven and a half inches wide, by eight long. A few sere maple leaves adorn and partly conceal the crown, at the ends of slight twigs which are buried in it. What a wholesome color! somewhat like the maple bark (and so again concealed) laid on in successive layers in arcs of circles a tenth of an inch wide, eyebrow-wise, gray or even white or brown of various shades, with a few dried maple leaves sticking out the top of it.

Oct. 16. P. M. — To the white pine grove beyond Beck Stow's.

What has got all the cones? How evenly the freshly fallen pine-needles are spread on the ground! quite like a carpet. Throughout this grove no square foot is left bare. I dug down with a stick and found that the layers of three or four years could be distinguished with considerable ease, and much deeper the old needles were raised in flakes or layers still. The topmost, or this year's, were fawn-colored; last year's, dark dull reddish; and so they went on, growing darker and more decayed, till, at the depth of three inches, where, perhaps, the needles were fifteen or twenty years old, they began to have the aspect of a dark loose-lying virgin mould, mixed with roots (pine cones and sticks a little higher). The freshly fallen needles lay as evenly strewn as if sifted over the whole surface, giving it

a uniform neat fawn-color, tempting one to stretch himself on it. They rested alike on the few green leaves of weeds and the fallen cones and the cobwebs between them, in every direction across one another like joggle-sticks. In course of years they are beaten by rain and snow into a coarse, thick matting or felt to cover the roots of the trees with.

I look at a grass-bird on a wall in the dry Great Fields. There is a dirty-white or cream-colored line above the eye and another from the angle of the mouth beneath it and a white ring close about the eye. The breast is streaked with this creamy white and dark brown in streams, as on the cover of a book.

Oct. 17. P. M. — Up river.

A fine Indian-summer afternoon. There is much gossamer on the button-bushes, now bare of leaves, and on the sere meadow-grass, looking toward the sun, in countless parallel lines, like the ropes which connect the masts of a vessel.

I see the roots of the great yellow lily lying on the mud where they have made a ditch in John Hosmer's meadow for the sake of the mud, gray-colored when old and dry. Some are three and a half inches in diameter, with their great eyes or protuberant shoulders where the leaf-stalks stood in quincunx order around them. What rank vigor they suggest! like serpents winding amid the mud of the meadow. You see where the ditcher's spade has cut them into masses about as thick as long. What are those clusters of cuplike cavities between the eyes, some nearly a quarter of

an inch in diameter, with a pistil-like prominence within?

I saw behind (or rather *in front of*) me as I rowed home a little dipper appear in mid-river, as if I had passed right over him. It dived while I looked, and I could not see it come up anywhere.

Oct. 18. Last night I was reading Howitt's account of the Australian gold-diggings, and had in my mind's eye the numerous valleys with their streams all cut up with foul pits, ten to a hundred feet deep and half a dozen feet across, as close as they can be dug, and half full of water, where men furiously rushed to probe for their fortunes, uncertain where they shall break ground, not knowing but the gold is under their camp itself; sometimes digging a hundred and sixty feet before they strike the vein, or then missing it by a foot; turned into demons and regardless of each other's rights in their thirst after riches; whole valleys for thirty miles suddenly honeycombed by the pits of the miners, so that hundreds are drowned in them. Standing in water and covered with mud and clay, they work night and day, dying of exposure and disease. Having read this and partly forgotten it, I was thinking of my own unsatisfactory life, doing as others do without any fixed star habitually in my eye, my foot not planted on any blessed isle. Then, with that vision of the diggings before me, I asked myself why I might not be washing some gold daily, though it were only the finest particles, or might not sink a shaft down to the gold within me and work that mine. There

is a Ballarat or Bendigo for you. What though it were a "Sulky Gully"? Pursue some path, however narrow and crooked, in which you can walk with love and reverence. Wherever a man separates from the multitude and goes his own way, there is a fork in the road, though the travellers along the highway see only a gap in the paling.[1]

P. M. — To Great Meadows to observe the hummocks left by the ice.

They are digging the pond at the new cemetery. I go by Peter's path. How charming a footpath! *Nihil humanum*, etc. I was delighted to find a new footpath crossing this toward Garfield's. The broad and dusty roads do not remind me of man so much as of cattle and horses. There are a great many crows scattered about on the meadow. What do they get to eat there? Also I scare up a dozen larks at once. A large brown marsh hawk comes beating the bush along the river, and ere long a slate-colored one (male), with black tips, is seen circling against a distant wood-side. I scare up in midst of the meadows a great many dark-colored sparrows, one or two at a time, which go off with a note somewhat like the lesser redpoll's, — some migrating kind, I think.[2]

There is a hummock in the lower part of the meadows near the river every two or three rods, where they appeared as thick last year, sometimes consisting of that coarse meadow-grass or sedge but quite as often

[1] [*Cape Cod, and Miscellanies*, pp. 465, 466; *Misc.*, Riv. 266, 267.] *Vide* [4] pages forward.

[2] Probably what I think must be shore larks in fall of '58.

of the common meadow sod. Very often it has lodged on one of those yellowish circles of the sedge, it being higher. Last winter's hummocks are not much flattened down yet. I am inclined to think that the coarse sedgy hummocks do not fall so round at first, but are wont to grow or spread in that wise when a fragment has been dropped. Perhaps the sedge is oftenest lifted because it is so coarse.

There is no life perceptible on this broad meadow except what I have named. The crows are very conspicuous, black against the green. The maple swamps, bare of leaves, here and there about the meadow, look like smoke blown along the edge of the woods. Some distinct maples, wholly stripped, look very wholesome and neat, nay even ethereal.

To-day my shoes are whitened with the gossamer which I noticed yesterday on the meadow-grass.

I find the white fragments of a tortoise-shell in the meadow, — thirty or forty pieces, straight-sided polygons, — which apparently a hay-cart passed over. They look like broken crockery. I brought it home and amused myself with putting it together. It is a painted tortoise. The variously formed sections or component parts of the shell are not broken, but only separated. To restore them to their places is like the game which children play with pieces of wood completing a picture. It is surprising to observe how these different parts are knitted together by countless minute teeth on their edges. Then the scales, which are not nearly so numerous, and therefore larger commonly, are so placed over the former as to break joints always,

as appears by the indented lines at their edges and the serrations of the shell. These scales, too, *slightly* overlap each other, *i. e.* the foremost over the next behind, so that they may not be rubbed off. Thus the whole case is bound together like a very stout band-box. The bared shell is really a very interesting study. The sternum in its natural position looks like a well-contrived drag, turned up at the sides in one solid piece.

Noticed a single wreath of a blood-red blackberry vine on a yellow sand slope, very conspicuous by contrast.

When I was surveying for Legross, as we went to our work in the morning, we passed by the Dudley family tomb, and Legross remarked to me, all in good faith, "Would n't you like to see old Daddy Dudley? He lies in there. I 'll get the keys if you 'd like. I sometimes go in and look at him."

The upper shell of this tortoise is formed of curved rafters or ribs, which are flatted out to half an inch or five eighths in width, but the rib form appears in an elevated ridge along the middle and in a spine at the lower end, fitting firmly into a deep hole in an edge bone, and also a projection (or process?) to meet the spinal column at the upper end. Some of these plates (?) I fitted together far more closely and wonderfully, considering the innumerable sharp serrations, than any child's wooden sections of a picture. Yet it is impossible to put the whole together again, so perfectly do the plates interlock and dovetail into each other at different angles, and they could only have grown together and shrunk apart. It is an admirable system of breaking joints, both in the arrangement of the

parts of the shell and in that of the scales which overlap the serrations of the former. The sternum consists of nine parts, there being an extra trigonal or pentagonal piece under the head or throat. The two middle pieces on each side curve upward to meet the edge bones, without any serration or joint at the lower edge of the sternum there; nor is there any joint in the scales there. In the upper shell there *appear to be* eight or nine small dorsal pieces, about sixteen rib pieces, and about twenty-two edge or marginal pieces; but of the parts of the upper shell I am not quite certain.

The sternums of the box turtles and the stinkpot are much flatter, *i. e.* not so much curved up at the sides, and are nearer to the upper shell. The painted tortoise has the flattest back; the *Cistudo Carolina*, the highest and fullest (with a ridge); the stinkpot, the sharpest. The *C. Blandingii* is very regularly arched. The *Emys insculpta* is of moderate elevation (with a ridge).

Those bright-red marks on the marginal scales of the painted tortoise remind me of some Chinese or other Oriental lacquer-work on waiters (?). This color fades to a pale yellow. The color is wholly in the scale above the bone. Of the bright colors, the yellow marks on tortoise-shells are the fastest.

How much beauty in decay! I pick up a white oak leaf, dry and stiff, but yet mingled red and green, October-like, whose pulpy part some insect has eaten beneath, exposing the delicate network of its veins. It is very beautiful held up to the light, — such work

as only an insect eye could perform. Yet, perchance, to the vegetable kingdom such a revelation of ribs is as repulsive as the skeleton in the animal kingdom. In each case it is some little gourmand, working for another end, that reveals the wonders of nature. There are countless oak leaves in this condition now, and also with a submarginal line of network exposed.

Men rush to California and Australia as if the true gold were to be found in that direction; but that is to go to the very opposite extreme to where it lies. They go prospecting further and further away from the true lead, and are most unfortunate when most successful. Is not our native soil auriferous? Does not a stream from the golden mountains flow through our native valley? and has it not for more than geologic ages been bringing down the shining particles and the nuggets? Yet, strange to tell, if a digger steal away prospecting for this true gold into the unexplored solitudes, there is no danger, alas, that any will dog his steps and endeavor to supplant him. He may claim and undermine the whole valley, even the cultivated and uninhabited portions, his whole life long in peace, and no one will ever dispute his claim. They will not mind his cradles or his toms. He is not confined to a claim twelve feet square, as at Ballarat, but may mine anywhere, and wash the whole wide world in his tom.[1]

To rebuild the tortoise-shell is a far finer game than any geographical or other puzzle, for the pieces

[1] [*Cape Cod, and Miscellanies*, p. 466; *Misc.*, Riv. 267, 268.] *Vide* [4] pages forward.

do not merely make part of a plane surface, but you have got to build a roof and a floor and the connecting walls. These are not only thus dovetailed and braced and knitted and bound together, but also held together by the skin and muscles within. It is a *band*-box.

Oct. 19. P. M. — To Pine Hill for chestnuts.

It is a very pleasant afternoon, quite still and cloudless, with a thick haze concealing the distant hills. Does not this haze mark the Indian summer?

I see Mrs. Riordan and her little boy coming out of the woods with their bundles of fagots on their backs. It is surprising what great bundles of wood an Irishwoman will contrive to carry. I confess that though I could carry one I should hardly think of making such a bundle of them. They are first regularly tied up, and then carried on the back by a rope, — somewhat like the Indian women and their straps. There is a strange similarity; and the little boy carries his bundle proportionally large. The sticks about four feet long. They make haste to deposit their loads before I see them, for they do not know how pleasant a sight it is to me. The Irishwoman does the squaw's part in many respects. Riordan also buys the old railroad sleepers at three dollars a hundred, but they are much decayed and full of sand.

Therien tells me, when I ask if he has seen or heard any large birds lately, that he heard a cock crow this morning, a wild one, in the woods. It seems a dozen fowls (chickens) were lost out of the cars here a fortnight ago. Poland has caught some, and they have

one at the shanty, but this cock, at least, is still abroad and can't be caught. If they could survive the winter, I suppose we should have had wild hens before now. Sat and talked with Therien at the pond, by the railroad. He says that James Baker told the story of the perch leaping into a man's throat, etc., of his father or uncle (Amos?).

The woods about the pond are now a perfect October picture; yet there *have been* no very bright tints this fall. The young white and the shrub oak leaves were withered before the frosts came, perhaps by the late drought after the wet spring.

Walking in E.'s path west of the pond, I am struck by the conspicuous wreaths of waxwork leaves about the young trees, to the height of twelve or fifteen feet. These broad and handsome leaves are still freshly green, though drooping or hanging now closely about the vine, but contrast remarkably with the bare trunks and the changed leaves above and around.

I hear many crickets by this path and see many warily standing on the *qui vive* in awkward positions, or running their heads under a chip, or prying into a hole, but I can see none creaking. I see at last a few white pine cones open on the trees, but almost all appear to have fallen. The chestnuts are scarce and small and apparently have but just begun to open their burs.

That globular head of pale-yellow spheres of seed-parachutes along the wood road is the rough hawkweed. The single heads of savory-leaved aster are of the same color now.

When, returning at 5 o'clock, I pass the pond in the road, I see the sun, which is about entering the grosser hazy atmosphere above the western horizon, brilliantly reflected in the pond, — a dazzling sheen, a bright golden shimmer. His broad sphere extended stretches the whole length of the pond toward me. First, in the extreme distance, I see a few sparkles of the gold on the dark surface; then begins a regular and solid column of shimmering gold, straight as a rule, but at one place, where a breeze strikes the surface from one side, it is remarkably spread or widened, then recovers its straightness again, thus:

Again it is remarkably curved, say thus: then broken into several pieces, then straight and entire again, then spread or blown aside at the point like smoke from a chimney, thus:

Of course, if there were eyes enough to occupy all the east shore, the whole pond would be seen as one dazzling shimmering lake of melted gold. Such beauty and splendor adorns our walks!

I measured the depth of the needles under the pitch pines east of the railroad (behind the old shanties), which, as I remember, are about thirty years old. In one place it is three quarters of an inch in all to the soil, in another one and a quarter, and in a hollow under a larger pine about four inches. I think the thickness of the needles, old and new, is not more than one inch there on an average. These pines are only four or five inches thick.

See slate-colored snowbirds.

Talking with Bellew this evening about Fourierism and communities, I said that I suspected any enterprise in which two were engaged together. "But," said he, "it is difficult to make a stick stand unless you slant two or more against it." "Oh, no," answered I, "you may split its lower end into three, or drive it single into the ground, which is the best way; but most men, when they start on a new enterprise, not only figuratively, but really, *pull up stakes*. When the sticks prop one another, none, or only one, stands erect."

He showed me a sketch of Wachusett. Spoke of his life in Paris, etc. I asked him if he had ever visited the Alps and sketched there. He said he had not. Had he been to the White Mountains? "No," he answered, "the highest mountains I have ever seen were the Himalayas, though I was only two years old then." It seems that he was born in that neighborhood.

He complains that the Americans have attained to bad luxuries, but have no comforts.

Howitt says of the man who found the great nugget which weighed twenty-eight pounds at the Bendigo diggings in Australia: "He soon began to drink; got a horse, and rode all about, generally at full gallop, and when he met people, called out to inquire if they knew who he was, and then kindly informed them that he was 'the bloody wretch that had found the nugget.' At last he rode full speed against a tree, and nearly knocked his brains out. He is a hopelessly ruined man." In my opinion there was no danger, for he had already

knocked his brains out against the nugget. But he is a type of the class. They are all fast men. Hear some of the names of the places where they dig: "Jackass Flat," — "Sheep's-Head Gully," — "Sulky Gully," — "Murderer's Bar," etc.[1]

Oct. 20. P. M. — To Nawshawtuct.

Agreeable to me is the scent of the withered and decaying leaves and pads, pontederias, on each side as I paddle up the river this still cloudy day, with the faint twittering or chirping of a sparrow still amid the bare button-bushes. It is the scent of the year, passing away like a decaying fungus, but leaving a rich mould, I trust.

On the 18th I found the Great Meadows wet, yet Beck Stow's was remarkably dry. Last summer the case was reversed.

I find, here and there on the hill, apples, sometimes three or four, carried to the mouth of a striped squirrel's hole, four or five rods from the tree, with the marks of his teeth in them, by which he carried them, and the chankings or else fragments of the skin of others there. There is no heap of sand to betray these little holes, but they descend perpendicularly in the midst of a clean sod. I was at first admiring the beauty of the wild apples, — now is the time, — some freckled with blood-red spots and perhaps also touched with a greenish rust here and there, like a fine lichen or fungus.[2]

[1] [*Cape Cod, and Miscellanies*, p. 467; *Misc.*, Riv. 268.]

[2] [*Excursions*, p. 315; Riv. 386.]

I see on the dead top of a hickory, twittering very much like swallows, eighteen and more bluebirds, perhaps preparing to migrate.

I have collected and split up now quite a pile of driftwood, — rails and riders and stems and stumps of trees, — perhaps half or three quarters of a tree. It is more amusing, not only to collect this with my boat and bring [it] up from the river on my back, but to split it also, than it would be to speak to a farmer for a load of wood and to saw and split that. Each stick I deal with has a history, and I read it as I am handling it, and, last of all, I remember my adventures in getting it, while it is burning in the winter evening. That is the most interesting part of its history. It has made part of a fence or a bridge, perchance, or has been rooted out of a clearing and bears the marks of fire on it. When I am splitting it, I study the effects of water on it, and, if it is a stump, the curiously winding grain by which it separates into so many prongs, — how to take advantage of its grain and split it most easily. I find that a dry oak stump will split pretty easily in the direction of its diameter, but not at right angles with it or along its circles of growth. I got out some good knees for a boat. Thus one half the value of my wood is enjoyed before it is housed, and the other half is equal to the whole value of an equal quantity of the wood which I buy.

Some of my acquaintances have been wondering why I took all this pains, bringing some nearly three miles by water, and have suggested various reasons for it. I tell them in my despair of making them under-

stand me that it is a profound secret, — which it has proved, — yet I did hint to them that one reason was that I wanted to get it. I take some satisfaction in eating my food, as well as in being nourished by it. I feel well at dinner-time as well as after it. The world will never find out why you don't love to have your bed tucked up for you, — why you will be so perverse. I enjoy more drinking water at a clear spring than out of a goblet at a gentleman's table. I like best the bread which I have baked, the garment which I have made, the shelter which I have constructed, the fuel which I have gathered.

It is always a recommendation to me to know that a man has ever been poor, has been regularly born into this world, knows the language. I require to be assured of certain philosophers that they have once been barefooted, footsore, have eaten a crust because they had nothing better, and know what sweetness resides in it.

I have met with some barren accomplished gentlemen who seemed to have been to school all their lives and never had a vacation to live in. Oh, if they could only have been stolen by the Gypsies! and carried far beyond the reach of their guardians! They had better have died in infancy and been buried under the leaves, their lips besmeared with blackberries, and Cock Robin for their sexton.

Oct. 21. It began to rain about 10 o'clock last evening after a cloudy day, and it still rains, gently but steadily, this morning. The wind must be east,

for I hear the church bell very plainly; yet I sit with an open window, it is so warm.

Looking into the yard, I see the currant bushes all bare of leaves, as they have been some time; but the gooseberries at the end of their row are covered with reddened leaves. This gradualness in the changing and falling of the leaves produces agreeable effects and contrasts. The currant row is bare, but the gooseberries at the end are full of scarlet leaves still.

I have never liked to have many rich fruits ripening at the same season. When Porter apples, for instance, are ripe, there are also other early apples and pears and plums and melons, etc. Nature by her bounteousness thus disgusts us with a sense of repletion — and uncleanness even. Perhaps any one of these fruits would answer as well as all together. She offers us too many good things at once.

I enjoyed getting that large oak stump from Fair Haven some time ago, and bringing it home in my boat. I tipped it in with the prongs up, and they spread far over the sides of the boat. There was no passing amidships. I much enjoyed this easy carriage of it, floating down the Musketaquid from far. It was a great stump and sunk my boat considerably, and its prongs were so in the way that I could take but a short stroke with my paddle. I enjoyed every stroke of my paddle, every rod of my progress, which advanced me so easily nearer to my port. It was as good as to sit by the best oak wood fire. I still enjoy such a conveyance, such a victory, as much as boys do riding on a rail. All the upper part of this, when I came to split it, I

found to be very finely honeycombed, reduced to a coarse cellular mass, apparently by shrinkage and wasting; but it made excellent fuel, nevertheless, as if all the combustible part remained. Only the earthy had returned to earth.

When Allen was here the other day, I found that I could not take two steps with him. He taught school in Concord seventeen [?] years ago, and has not been here since. He wished much to see the town again, but nothing living and fair in it. He had, I should say, a very musty recollection of it. He called on no living creature among all his pupils, but insisted on going [to] the new burying-ground and reading all the epitaphs. I waited at the gate, telling him that that ground did not smell good. I remembered when the first body was placed in it. He did, however, ask after one or two juvenile scamps and one idiotic boy who came to school to him, — how they had turned out, — and also after a certain caged fool, dead since he was here, who had lived near where he boarded; also after a certain ancient tavern, now pulled down. This at odd intervals, for he improved all the rest of his time while he was here in attending a Sabbath-school convention.

I have been thinking over with Father the old houses in this street. There was the Hubbard (?) house at the fork of the roads; the Thayer house (now Garrison's); Sam Jones's (now Channing's); Willoughby Prescott's (a bevel-roof, which I do not remember), where Loring's is (Hoar's was built by a Prescott); Ma'm Bond's; the Jones Tavern (Bigelow's); the old Hurd (or Cumming's?) house; the Dr. Hurd house;

the old mill; and the Richardson Tavern (which I do not remember). On this side, the Monroe house, in which we lived; the Parkman house, which William Heywood told me twenty years ago that he helped raise the rear of sixty years before (it then sloping to one story behind), and that then it was called an old house (Dr. Ripley said that a Bond built it); the Merrick house; a rough-cast house where Bates's is (Betty ?); and all the south side of the Mill-Dam. Still further from the centre the old houses and sites are about as numerous as above. Most of these houses slanted to one story behind.

P. M. — Up Assabet.

A damp cloudy day only, after all, and scarcely any rain; a good day for all *hunters* to be out, especially on the water.

The yellowish leaves of the black oak incline soon to a decayed and brown look. The red oak is more red. But the scarlet is very bright and conspicuous. How finely its leaves are cut against the sky with sharp points, especially near the top of the tree! They look somewhat like double or treble crosses.[1] The squirrels appear to have stripped this tree entirely, and I find the fragments of nutshells beneath it. They have also eaten the white and red and black oak acorns very generally, but there are more of the last left.

Further up, on the big red maple in Wheeler's Swamp, I see two gray squirrels chasing each other round and round the trunk of the tree, now close to each other, now

[1] [*Excursions*, p. 278; Riv. 341.]

far apart, one stealing off behind a limb, and now resting on opposite sides of the trunk, — where they might not be noticed, being of the same color with the bark, — indifferently with their heads down or up. Then away goes one out on a twig, and leaps into the next tree, and the other swiftly follows, and sometimes, when the twig is slight or chiefly leaves they leap into, they have to make a swinging somerset of it, to save themselves while they cling to it.

At length they separate to feed, and I see them running up to the very tops of the swamp white oaks and out to the extremities of the boughs, and jumping at the extreme twig which bears acorns, which they cut off, and devour, sitting on a firmer limb. It is surprising how rapidly they devour one after another, dropping the cups and scales and bits of the meat. It is surprising also to observe, when one wishes to reach a certain part of a neighboring tree, how surely he runs back to the trunk and then selects the right limb by which to reach it, without any hesitation, as if he knew the road.

You see, around the muskrat-houses, a clear space, where they have cut off the pontederias of which they are built; and now, after last night's rain, the river is risen some, and the pontederia roots, etc., which have been eaten by them, are washed up together next the shore.

That apparently shell-less snail or slug which is so common this damp day under apple trees, eating the apples, is evidently one of the naked *Mollusca*, the Division *Gasteropoda*, a *Limax*, perhaps the *Limax*

tunicata of Gould. He describes but one other species.

Almost all wild apples are handsome. Some are knurly and peppered all over or on the stem side with fine crimson spots on a yellowish-white ground; others have crimson blotches or eyes, more or less confluent and fiery when wet, — for apples, like shells and pebbles, are handsomest in a wet day. Taken from under the tree on the damp sward, they shrivel and fade. Some have these spots beneath a reddened surface with obscure rays. Others have hundreds of fine blood-red rays, running regularly, though broken, from the stem dimple to the blossom, like meridian lines, on a straw-colored ground, — perfect spheres. Others are a deep, dark red, with very obscure yet darker rays; others a uniform clear, bright red, approaching to scarlet.[1]

Oct. 22. Another cloudy day without rain.

P. M. — To Fair Haven Hill *via* Hubbard's Grove.

How welcome this still, cloudy day! An inward sunniness more than makes up for the want of an external one. As I pass this grove, I see the open ground strewn and colored with yellow leaves, which have been wafted from a large black birch ten rods within the wood. I see at a distance the scattered birch-tops, like yellow flames amid the pines, also, in another direction, the red of oaks in the bosom of a pine wood, and, in sprout-lands on Fair Haven, the deep and uniform red of young oaks.

[1] [*Excursions*, pp. 314, 315; Riv. 385–387.]

I sat on a bank at the brook crossing, beyond the grove, to watch a flock of *seringos*, perhaps Savannah sparrows, which, with some *F. hyemalis* and other sparrows, were actively flitting about amid the alders and dogwood. At last I saw one resting a moment to prune himself, and in this operation he opened his plumage very thoroughly to me. Distinct yellow eyebrows, extending round beneath the bill; tail blackish or dusky; primaries bay or chestnut; secondaries (?) edged with white; some white lines on shoulders; *pale* flesh-colored bill and legs; toward vent beneath, pure white. Suddenly a pigeon hawk [1] dashed over the bank very low and within a rod of me, and, striking its wings against the twigs with a clatter close to a sparrow, which escaped, it alighted amid the alders in front, within four rods of me. It was attracted by the same objects which attracted me. It sat a few moments, balancing itself and spreading its tail and wings, — a chubby little fellow. Its back appeared a sort of deep chocolate-brown. Every sparrow at once concealed itself, apparently deep in the bushes next the ground. Once or twice he dashed down there amid the alders and tried to catch one. In a few minutes he skimmed along the hedge by the path and disappeared westward. But presently, hearing the sound of his wings amid the bushes, I looked up and saw him dashing along through the willows and then out and upward high over the meadow in pursuit of a sparrow (perhaps a seringo). The sparrow flew pretty high and kept doubling. When it flew

[1] Was I sure?

direct, the hawk gained, and got within two or three feet of it; but when it doubled, it gained on the hawk; so the latter soon gave up the chase, and the little bird flew off high over my head, with a panting breath and a rippling ricochet flight, toward the high pine grove. When I passed along the path ten minutes after, I found that all those sparrows were still hid under the bushes by the ditch-side, close to the ground, and I saw nothing of them till I scared them out by going within two or three feet. No doubt they warned each other by a peculiar note. What a corsair the hawk is to them! — a little fellow hardly bigger than a quail.

Birds certainly are afraid of man. They [allow] all other creatures, — cows and horses, etc., — excepting only one or two kinds, birds or beasts of prey, to come near them, but not man. What does this fact signify? Does it not signify that man, too, is a beast of prey to them? Is he, then, a true lord of creation, whose subjects are afraid of him, and with reason? They know very well that he is not humane, as he pretends to be.

In Potter's pasture, as you go to Fair Haven Hill, where he had grain in the summer, the great mullein leaves are strewn as thick as turnips that have been sown. This the first year. The next I suppose they will blossom. They have felled and carted off that middling-sized white oak just beyond. I count about one hundred and twenty rings of growth. In Potter's maple swamp, where the red maple leaves lie in thick beds on the ground, what a strong mustiness, even sourness in some places! Yet I like this scent. With

the present associations, sweet to me is the mustiness of the grave itself. I hear a hyla.

The swamp pyrus (*Amelanchier*) is leafing again. One opening leaflet is an inch long, while the reddish-yellow leaves still hold on at the end of the twig above. Its green swollen buds are generally conspicuous, curving round the stems. There is a twig full of those dead black leaves on one. It is a new spring there. I hear the sound of the first flail from William Wheeler's barn. I mark the gray diverging stems of the dogwood, which is now bare, topped with the long, recurved, dry panicles like loose barbs.

I think that the trees generally have not worn very brilliant colors this month, but I find to-day that many small shrubs which have been protected by the forest are remarkably fair and bright. They, perhaps, have not felt the drought nor been defaced by insects. They are the best preserved and the most delicately tinted. I see the maple viburnum leaves a dark, dull spotted crimson toward the edges, like some wild apples. I distinguish it from the red maple at first only by its downy feeling beneath and the simple form of some leaves. These have also a short petiole and not a sharp sinus. Then there is the more or less crimson *nudum* viburnum, passing from scarlet through crimson to black-spotted and crimson in its decay. The blackness spreads very fast in one night. The glossy scarlet blueberries and the redder huckleberries; the scarlet choke-berry, or vermilion; some red maples which are yellow with only scarlet eyes. But still, in the shade and shelter of the woods as fair as anything,

the leaves of the wild cherry, so clear of injury from insects, passing from green through yellow or a cherry red to the palest and purest imaginable cherry-color, the palest fawn with a mere tinge of cherry, with their fine overlapping serrations. Those great twisted yellow leaves of hickory sprouts, yellow and green, from which I used to drink. And here is a very handsome orange-red high blackberry leaf, with its five leafets all perfect; most are dark-red. But all these, like shells and pebbles must be seen on their own seashore. There are two seasons when the leaves are in their glory, their green and perfect youth in June and this their ripe old age. Some of the very young oak leaves have the deepest lustreless or inward scarlet of any. Most of the reddish oak leaves now in the woods are spotted, mildewed as it were, by the drip from above.

Brought home the three kinds of lechea, whose pretty whorls of radical shoots or branches are now, methinks, more conspicuous than before. I should distinguish the two lesser by the one having larger pods and being more slender, taller, and more simple every way, the other low, bushy, spreading, the branches making a larger angle with the stems, fine-leaved, small and few pods, and the radical shoots (alone of the three specimens I have) very densely *branched* and leafed. Those of the other two are simple. All have a part of the radical leafets above recurved.

The Plymouth fishermen have just come home from the Banks, except one.

Oct. 23. P. M. — To Saw Mill Brook.

The streets are strewn with buttonwood leaves, which rustle under your feet, and the children are busy raking them into heaps, some for bonfires. The large elms are bare; not yet the buttonwoods. The sugar maples on the Common stand dense masses of rich yellow leaves with a deep scarlet blush, — far more than blush. They are remarkably brilliant this year on the exposed surfaces. The last are as handsome as any trees in the street.[1] I am struck with the handsome form and clear, though very pale, say lemon, yellow of the black birch leaves on sprouts in the woods, finely serrate and distinctly *plaited* from the midrib. I plucked three leaves from the end of a red maple shoot, an underwood, each successively smaller than the last, the brightest and clearest scarlet that I ever saw. These and the birch attracted universal admiration when laid on a sheet of white paper and passed round the supper table, and several inquired particularly where I found them. I never saw such colors painted. They were without spot;[2] ripe leaves. The small willows two or three feet high by the roadside in woods have some rich, deep chrome-yellow leaves with a gloss. The sprouts are later to ripen and richer-colored.

The pale whitish leaves of horehound in damp grassy paths, with its spicy fruit in the axils, are tinged with purple or lake more or less.

Going through what was E. Hosmer's muck-hole

[1] [*Excursions*, p. 271; Riv. 332, 333.]

[2] Yet some spots appeared and they were partly wilted the next morning, so delicate are they.

pond, now almost entirely dry, the surface towards the shore is covered with a dry crust more or less cracked, which crackles under my feet. I strip it up like bark in long pieces, three quarters of an inch thick and a foot wide and two long. It appears to be composed of fine mosses and perhaps utricularia and the like, such as grow in water. A *little* sphagnum is quite conspicuous, *erect* but dry, in it.

Now is the time for chestnuts. A stone cast against the trees shakes them down in showers upon one's head and shoulders. But I cannot excuse myself for using the stone. It is not innocent, it is not just, so to maltreat the tree that feeds us. I am not disturbed by considering that if I thus shorten its life I shall not enjoy its fruit so long, but am prompted to a more innocent course by motives purely of humanity. I sympathize with the tree, yet I heaved a big stone against the trunks like a robber, — not too good to commit murder. I trust that I shall never do it again. These gifts should be accepted, not merely with gentleness, but with a certain humble gratitude. The tree whose fruit we would obtain should not be too rudely shaken even. It is not a time of distress, when a little haste and violence even might be pardoned. It is worse than boorish, it is criminal, to inflict an unnecessary injury on the tree that feeds or shadows us. Old trees are our parents, and our parents' parents, perchance. If you would learn the secrets of Nature, you must practice more humanity than others. The thought that I was robbing myself by injuring the tree did not occur to me, but I was affected as if I had

cast a rock at a sentient being, — with a duller sense than my own, it is true, but yet a distant relation. Behold a man cutting down a tree to come at the fruit! What is the moral of such an act?

Faded white ferns now at Saw Mill Brook. They press yellow or straw-color.

Ah! we begin old men in crime. Would that we might grow innocent at last as the children of light!

A downy woodpecker on an apple tree utters a sharp, shrill, rapid *tea te t, t, t, t t t t t.*

Is that tall weed in Mrs. Brooks's yard *Cacalia suaveolens?* ? Yet stem more angled than grooved; four or five feet high. Some time ago.

Cousin Charles writes that his horse drew 5286 pounds up the hill from Hale's factory, at Cattle-Show in Haverhill the other day.

Oct. 24. Rained last night and all this day for the most part, bringing down the leaves, buttonwoods and sugar maples, in the street. The rich yellow and scarlet leaves of the sugar maple on the Common, which now thickly cover the grass in great circles about the trees, half having fallen, look like the reflection of the trees in water, and light up the Common, reflecting light even to the surrounding houses. The gentle touch of the rain brings down more leaves than the wind.

Looked at the old picture of Concord at Mrs. Brooks's, — she says by a Minott, an uncle (or grand-uncle?) of hers. There are the British marching into town in front of the meeting-house and facing about

in front of where the tavern now stands, scattered Britons going up Main Street and about the town, and two officers on the Burying Hill looking west with a spy-glass.

The meeting-house stands as I remember it, but with three stories of windows, door in front toward Common, and no porches or spire; horse-sheds and noon (?) house behind and one side. The Jarvis house; then Wright's Tavern very plain; a bevel-roofed house endwise to the road where the Middlesex House is, which Mrs. B. calls Dr. Minott's house;[1] then a little hut; then the old court-house about where the brick schoolhouse is (this the extreme right). Left of the bevel-roofed house is a small house where the stable and sheds are, — some say Betty Hartshorne's; then a small building on the Mill-Dam; then the old mill; the Vose house, plain, three stories; another house *just* beyond and apparently in front of it; E. Hubbard's plain, and a small house back and towards the Vose house, and a dozen or fifteen provincials there; then some houses, probably Peter Wheeler's three or four storehouses, whence redcoats are rolling barrels into the pond, — and maybe partly from E. Hubbard's; and perhaps that is the Timothy, and after Peter, Wheeler house seen a little further east, where N. Stow's house is now. A large house apparently where the brick house is, and a row seen behind it up the street; Dr. Hurd's house, and four small buildings far behind it; and others seen up street behind Hurd

[1] Yes, and President Langdon lived there. The same, altered, was the tavern I knew.

house. But we see no further up *in* the street than where N. Brooks now lives. Beyond, the town appears well wooded. Lee's Hill also on this side. Great and Little Wachusett are seen in the horizon, and Nobscot.

Oct. 25. Quite cold it has cleared up after the rain.

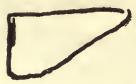
P. M. — I row up the river, which has risen eight or nine inches After these pleasant and warm days it is suddenly cold and windy, and the risen waters have an angry look. It is uncomfortable rowing with wet hands in this wind. The muskrats must now prepare for winter in earnest. I see many places where they have left clamshells recently. Now gather all your apples, if you have not before, or the frost will have them. The willows along the river now begin to look faded and somewhat bare and wintry. The dead wool-grass, etc., characterizes the shore. The meadows look sere and straw-colored.

Oct. 26. P. M. — To Conantum.

Another clear cold day, though not so cold as yesterday. The light and sun come to us directly and freely, as if some obstruction had been removed, — the windows of heaven had been washed.

The old house on Conantum is fast falling down. Its chimney, laid in clay, measures, on the lower floor, twelve and a half feet in breadth across the hearth, oven, and a small fireplace, parallel with the end of the house. On a level with the chamber floor it measures on the front side eight feet. The mantel-tree of a *small*

fireplace in a chamber is an oak joist with the inside corner sloped off thus: That of the great kitchen fireplace is a pine timber, ten inches by thirteen, also with a great sloped surface within, showing traces of fire. The small girders (?) of the roof overlap a foot or more on the rafters (?).



I see some farmers now cutting up their corn. The sweet viburnum leaves hang thinly on the bushes and are a dull crimsonish red. What apples are left out now, I presume that the farmers do not mean to gather. The witch-hazel is still freshly in flower, and near it I see a houstonia in bloom. The hillside is slippery with new-fallen white pine leaves. The leaves of the oaks and hickories have begun to be browned, — lost their brilliancy.

I examine some frostweed there near the hazel. It is still quite alive, — the leaves now a purplish brown, — indeed just out of bloom, and its bark at the ground is quite tight and entire. Pulling it up, I find bright-pink shoots to have put forth half an inch long and starting even at the surface of the sod. Is not this, as well as its second blossoming, somewhat peculiar to this plant? And may it not be that, when at last the cold is severe, the sap is frozen and bursts the bark and the breath of the dying plant is frozen about it?

I return by way of the mocker-nut trees. The squirrels have already begun on them, though the trees are still covered with yellow and brown leaves, and the nuts do not fall. It is surprising to see how they have gnawed in two and made wrecks of the great, hard

nuts, not stopping to take any advantage. A little this side I see a red squirrel dash out from the wall, snatch an apple from amid many on the ground, and, running swiftly up the tree with it, proceed to eat it, sitting on a smooth dead limb, with its back to the wind and its tail curled close over its back. It allows me to approach within eight feet. It holds the apple between its two fore paws and scoops out the pulp, mainly with its lower incisors, making a saucer-like cavity, high and thin at the edge, where it bites off the skin and lets it drop. It keeps its jaws a-going very fast, from time to time turning the apple round and round with its paws (as it eats), like a wheel in a plane at right angles to its body. It holds it up and twirls it with ease. Suddenly it pauses, having taken alarm at something, then drops the remainder of the apple in [the hollow] of the bough and glides off by short snatches, uttering a faint, sharp bird-like note.

The song sparrow still sings on a button-bush.

A columbine leaf curiously marked by the eating of an insect, — a broad white trail, corresponding mainly to the lobes of the leaf. That little grayish-green and rigid moss-like plant on top of Lee's Cliff, now dropping fine orange-colored pellets or spores (?), seems to be the *Selaginella rupestris?*

I sometimes think that I must go off to some wilderness where I can have a better opportunity to play life, — can find more suitable materials to build my house with, and enjoy the pleasure of collecting my fuel in the forest. I have more taste for the wild sports of

hunting, fishing, wigwam-building, making garments of skins, and collecting wood wherever you find it, than for butchering, farming, carpentry, working in a factory, or going to a wood market.

Oct. 27. P. M. — A-chestnutting down the Turnpike.

There are *many* fringed gentians, now considerably frost-bitten, in what was E. Hosmer's meadow between his dam and the road. It is high time we came a-nutting, for the nuts have nearly all fallen, and you must depend on what you can find on the ground, left by the squirrels, and cannot shake down any more to speak of. The trees are nearly all bare of leaves as well as burs. The wind comes cold from the northwest, as if there were snow on the earth in that direction. Larches are yellowing.

I try one of the wild apples in my desk. It is remarkable that the wild apples which I praise as so spirited and racy when eaten in the fields and woods, when brought into the house have a harsh and crabbed taste. As shells and pebbles must be beheld on the seashore, so these October fruits must be tasted in a bracing walk amid the somewhat bracing airs of late October. To appreciate their wild and sharp flavors, it seems necessary that you be breathing the sharp October or November air. The outdoor air and exercise which the walker gets give a different tone to his palate, and he craves a fruit which the sedentary would call harsh and crabbed even. The palate rejects a wild apple eaten in the house — so of haws and

acorns — and demands a tamed one, for here you miss that October air which is the wine it is eaten with. I frequently pluck wild apples of so rich and spicy a flavor that I wonder all orchardists do not get a scion from them, but when I have brought home my pockets full, and taste them in the house, they are unexpectedly harsh, crude things. They must be eaten in the fields, when your system is all aglow with exercise, the frosty weather nips your fingers (in November), the wind rattles the bare boughs and rustles the leaves, and the jay is heard screaming around.

So there is one thought for the field, another for the house. I would have my thoughts, like wild apples, to be food for walkers, and will not warrant them to be palatable if tasted in the house.

To appreciate the flavor of those wild apples requires vigorous and healthy senses, papillæ firm and erect on the tongue and palate, not easily tamed and flattened. Some of those apples might be labelled, "To be eaten in the wind." [1]

Oct. 28. P. M. — By boat to Leaning Hemlocks.

I think it was the 18th that I first noticed snow-fleas on the surface of the river amid the weeds at its edge. Green leaves are now so scarce that the polypody at the Island rock is more conspicuous, and the terminal shield fern (?) further up.

As I paddle under the Hemlock bank this cloudy afternoon, about 3 o'clock, I see a screech owl sitting on the edge of a hollow hemlock stump about

[1] [*Excursions*, pp. 311–314; Riv. 382, 383, 385.]

three feet high, at the base of a large hemlock. It sits with its head drawn in, eying me, with its eyes partly open, about twenty feet off. When it hears me move, it turns its head toward me, perhaps one eye only open, with its great glaring golden iris. You see two whitish triangular lines above the eyes meeting at the bill, with a sharp reddish-brown triangle between and a narrow curved line of black under each eye. At this distance and in this light, you see only a black spot where the eye is, and the question is whether the eyes are open or not. It sits on the lee side of the tree this raw and windy day. You would say that this was a bird without a neck. Its short bill, which rests upon its breast, scarcely projects at all, but in a state of rest the whole upper part of the bird from the wings is rounded off smoothly, excepting the horns, which stand up conspicuously or are slanted back. After watching it ten minutes from the boat, I landed two rods above, and, stealing quietly up behind the hemlock, though from the windward, I looked carefully around it, and, to my surprise, saw the owl still sitting there. So I sprang round quickly, with my arm outstretched, and caught it in my hand. It was so surprised that it offered no resistance at first, only glared at me in mute astonishment with eyes as big as saucers. But ere long it began to snap its bill, making quite a noise, and, as I rolled it up in my handkerchief and put it in my pocket, it bit my finger slightly. I soon took it out of my pocket and, tying the handkerchief, left it on the bottom of the boat. So I carried it home and made a small cage in which to keep it, for a night. When I took it up,

it clung so tightly to my hand as to sink its claws into my fingers and bring blood.

When alarmed or provoked most, it snaps its bill and hisses. It puffs up its feathers to nearly twice its usual size, stretches out its neck, and, with wide-open eyes, stares this way and that, moving its head slowly and undulatingly from side to side with a curious motion. While I write this evening, I see that there is ground for much superstition in it. It looks out on me from a dusky corner of its box with its great solemn eyes, so perfectly still itself. I was surprised to find that I could imitate its note as I remember it, by a *guttural* whinnering.

A remarkably squat figure, being very broad in proportion to its length, with a short tail, and very cat-like in the face with its horns and great eyes. Remarkably large feet and talons, legs thickly clothed with whitish down, down to the talons. It brought blood from my fingers by clinging to them. It would lower its head, stretch out its neck, and, bending it from side to side, peer at you with laughable circumspection; from side to side, as if to catch or absorb into its eyes every ray of light, strain at you with complacent yet earnest scrutiny. Raising and lowering its head and moving it from side to side in a slow and regular manner, at the same time snapping its bill smartly perhaps, and faintly hissing, and puffing itself up more and more, — cat-like, turtle-like, both in hissing and swelling. The slowness and gravity, not to say solemnity, of this motion are striking. There plainly is no jesting in this case.

I saw yesterday at Saw Mill Brook a common salamander on a rock close to the water, not long dead, with a wound in the top of its head.

General color of the owl a rather pale and perhaps slightly reddish brown, the feathers centred with black. Perches with two claws above and two below the perch. It is a slight body, covered with a mass of soft and light-lying feathers. Its head muffled in a great hood. It must be quite comfortable in winter. Dropped a pellet of fur and bones (?) in his cage. He sat, not really moping but trying to sleep, in a corner of his box all day, yet with one or both eyes slightly open all the while. I never once caught him with his eyes shut. Ordinarily stood rather than sat on his perch.

Oct. 29. P. M. — Up Assabet.

Carried my owl to the hill again. Had to shake him out of the box, for he did not go of his own accord. (He had learned to alight on his perch, and it was surprising how lightly and noiselessly he would hop upon it.) There he stood on the grass, at first bewildered, with his horns pricked up and looking toward me. In this strong light the pupils of his eyes suddenly contracted and the iris expanded till they were two great brazen orbs with a centre spot merely. His attitude expressed astonishment more than anything. I was obliged to toss him up a little that he might feel his wings, and then he flapped away low and heavily to a hickory on the hillside twenty rods off. (I had let him out in the plain just east of the hill.) Thither I followed and tried to start him again. He was now on

the *qui vive*, yet would not start. He erected his head, showing some neck, narrower than the round head above. His eyes were broad brazen rings around bullets of black. His horns stood quite an inch high, as not before. As I moved around him, he turned his head always toward me, till he looked *directly* behind himself as he sat crosswise on a bough. He behaved as if bewildered and dazzled, gathering all the light he could and ever straining his great eyes toward [you] to make out who you are, but not inclining to fly. I had to lift him again with a stick to make him fly, and then he only rose to a higher perch, where at last he seemed to seek the shelter of a thicker cluster of the sere leaves, partly crouching there. He never appeared so much alarmed as surprised and astonished.

When I first saw him yesterday, he sat on the edge of a hollow hemlock stump about three feet high, at the bottom of a large hemlock, amid the darkness of the evergreens that cloudy day. (It threatened to rain every moment.) At the bottom of the hollow, or eighteen inches beneath him, was a very soft bed of the fine green moss (hypnum) which grows on the bank close by, probably his own bed. It had been recently put there.

When I moved him in his cage he would cling to the perch, though it was in a perpendicular position, one foot above another, suggesting his habit of clinging to and climbing the inside of hollow trees. I do not remember any perpendicular line in his eyes, as in those of the cat.

I see many aphides very thick and long-tailed on the alders. Soapwort gentian and pasture thistle still. There are many fresh election-cake toadstools amid the pitch pines there, and also very regular higher hemispherical ones with a regularly warted or peppered surface.

As I was passing Merrick's pasture, I saw and counted about a hundred crows advancing in a great rambling flock from the southeast and crossing the river on high, and cawing.

There is a wild apple on the hill which has to me a peculiarly pleasant bitter tang, not perceived till it is three quarters tasted. It remains on the tongue. As you cut it, it smells exactly like a squash-bug. I like its very acerbity. It is a sort of triumph to eat and like it, an ovation. In the fields alone are the sours and bitters of nature appreciated; just as the woodchopper eats his meal in a sunny glade in middle of a winter day, with contentment, in a degree of cold which, experienced in the house, would make the student miserable, — basks in a sunny ray and dreams of summer, in a degree of cold which, felt in a chamber, would make a student wretched. They who are abroad at work are not cold; it is they who sit shivering in houses. As with cold and heat, so with sweet and sour. This natural raciness, sours and bitters, etc., which the diseased palate refuses, are the true casters and condiments. What is sour in the house a bracing walk makes sweet. Let your condiments be in the condition of your senses. Apples which the farmer neglects and leaves out as unsalable, and unpalatable to those

who frequent the markets, are choicest fruit to the walker.[1] When the leaves fall, the whole earth is a cemetery pleasant to walk in. I love to wander and muse over them in their graves, returning to dust again. Here are no lying nor vain epitaphs. The scent of their decay is pleasant to me. I buy no lot in the cemetery which my townsmen have just *consecrated* with a poem and an auction, paying so much for a choice. *Here* is room enough for me.[2] The swamp white oak has a fine, firm, leathery leaf with a silver under side, half of them now turned up. Oaks are now fairly brown; very few still red. Water milkweed discounts.

I have got a load of great hardwood stumps. For sympathy with my neighbors I might about as well live in China. They are to me barbarians, with their committee-works and gregariousness.

Returning, I scare up a blue heron from the bathing-rock this side the Island. It is whitened by its droppings, in great splotches a foot or more wide. He has evidently frequented it to watch for fish there. Also a flock of blackbirds fly eastward over my head from the top of an oak, either red-wings or grackles.

Oct. 30. *Wednesday.* Going to the new cemetery, I see that the scarlet oak leaves have still some brightness; perhaps the latest of the oaks.

[1] [*Excursions*, pp. 311–313; Riv. 382–385.]

[2] [*Excursions*, p. 270; Riv. 331, 332.]

END OF VOLUME VII

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